

BIBLIOGRAPHY OF NEVADA AND UTAH VEGETATION DESCRIPTION¹

P. S. Bourgeron², L. D. Engelking², J. S. Tuhy³, and J. D. Brotherson⁴

ABSTRACT.—Listed in alphabetical order by author are 934 references to literature of the native vegetation of Nevada and Utah. This updates and expands the 1967 bibliography of Christensen for Utah. A keyword-citation index is provided.

This bibliography includes 934 published and unpublished references to studies of Nevada and Utah's native vegetation, 1851–1989. Vegetation is broadly defined as the aggregate of self-reproducing plant species found in an area, or plant communities. This work updates and expands Christensen's (1967a, 1967b) bibliography of the vegetation of Utah. Papers cited in Christensen (1967a, 1967b) that did not refer directly to the study of the vegetation are not included here.

The emphasis is on plant communities, their description, species composition, physiognomy, and ecology, and the techniques and concepts used to recognize and analyze the communities. Our definition of vegetation ecology includes spatial and temporal relations of plant communities to the environment, broadly defined to include soil and climate, and to each other, at all levels, from the biomes to small-scale patterns occurring on a given site. We omitted references dealing solely with the flora of an area. Floras alone do not provide information on the assemblages of species and their relationships to the environment and to each other.

The following subjects are covered exhaustively: classification, community analysis (including structure and function), disturbance, diversity pattern, fire, gradient analysis, grazing, habitat studies, inventory, soil-vegetation analysis, succession, and zonation. Selected references to autecology, population biology, competition, phenology, management, and species range are included only when they specifically address some aspect of the Nevada-Utah vegetation patterns. Coverage of these tangential topics is not compre-

hensive. The only nonfield studies included are those explaining Nevada-Utah's vegetation patterns. Studies had to be conducted at least in part in Nevada and/or Utah. Many references pertinent to Nevada and/or Utah, but which were completely done in adjacent states, are excluded. Readers are referred to the relevant bibliographies for these citations.

The bibliography lists authors alphabetically. Each reference has been assigned one or more of 28 keywords. First, when applicable, it includes a definition of a broad vegetation type (alpine, desert, forest, grassland, riparian, shrubland, wetland, woodland) using the Unesco (Mueller-Dombois and Ellenberg 1974) definition. The use of riparian is restricted to communities along streams, the use of wetland to communities along all other water formations (lakes, bogs, etc.) The use of these broad terms does not substitute for a formal classification of the study vegetation. They are solely provided for easy retrieval of the appropriate source of information.

The choice of the other keywords (age-size structure, autecology, baseline study, bibliography, classification, community analysis, disturbance, diversity patterns, early exploration, fire, gradient analysis, grazing, habitat type, inventory, map, model, relict vegetation, soil-vegetation relationship, succession, zonation) reflects our own interests in vegetation patterns and not necessarily the author's original emphasis. The total number of keywords was kept small for easy use of the keyword-citation index. Finally, the keywords are used consistently for the same object of study throughout the bibliography.

¹Address reprint requests to the Utah Natural Heritage Program.

²The Nature Conservancy, 134 Union Blvd., Suite 125, Lakewood, Colorado 80228.

³Utah Natural Heritage Program, 1636 West North Temple, Suite 316, Salt Lake City, Utah 84116.

⁴Botany and Range Science Department, Brigham Young University, Provo, Utah 84602.

ACKNOWLEDGMENTS

Shirley Badame worked on various aspects of the literature search. Jeff Gruenert helped with the final search and contributed to the quality of the bibliography. Funding was provided by the Utah Natural Heritage Program and The Nature Conservancy's Rocky Mountain Heritage Task Force. This is a contribution of the Utah Natural Heritage Program and RMHTF. The authors would appreciate being informed of any omissions.

BIBLIOGRAPHY OF UTAH AND NEVADA VEGETATION

1. ALDER, G. M. 1970. Age profiles of aspen forests in Utah and northern Arizona. Unpublished thesis, University of Utah, Salt Lake City. 31 pp.
2. ALDON, E. F., AND T. J. LORING, TECHNICAL COORDINATORS. 1977. Ecology, uses, and management of pinyon-juniper woodlands. USDA Forest Service General Technical Report RM-39. Rocky Mountain Forest and Range Experiment Station, Fort Collins, Colorado. 32 pp.
3. ALEXANDER, R. R. 1985. Major habitat types, community types, and plant communities in the Rocky Mountains. USDA Forest Service General Technical Report RM-123. Rocky Mountain Forest and Range Experiment Station, Fort Collins, Colorado. 105 pp.
4. ALEXANDER, R. R. 1988. Forest vegetation on national forests in the Rocky Mountain and Intermountain regions: habitat types and community types. USDA Forest Service General Technical Report RM-162. Rocky Mountain Forest and Range Experiment Station, Fort Collins, Colorado. 47 pp.
5. ALLAN, J. S. 1962. The plant communities of the Big Cottonwood Canyon drainage. Unpublished thesis, University of Utah, Salt Lake City.
6. ALLAN, J. S. 1977. The plant communities of Arches National Park. Unpublished dissertation, Brigham Young University, Provo, Utah. 98 pp.
7. ALLMAN, V. P. 1952. A preliminary study of the vegetation in an enclosure in the chaparral of the Wasatch Mountains, Utah. Unpublished thesis, Brigham Young University, Provo, Utah.
8. ALLMAN, V. P. 1953. A preliminary study of the vegetation in an enclosure in the chaparral of the Wasatch Mountains, Utah. Proceedings of Utah Academy of Science, Arts and Letters 30: 63-73.
9. ALLRED, D. M., D. E. BECK, AND C. D. JORGENSEN. 1963. Biotic communities of the Nevada Test Site. Brigham Young University Science Bulletin, Biological Series 2(3): 1-52.
10. ANDALEX RESOURCES. 1988. Vegetation information. Volume 1, chapter 3, section G (783.19), pages 42-46 in Mining and Reclamation Plan for Wildcat Loadout Facility, Andalex Resources. Utah Division of Oil, Gas and Mining Number ACT/007/033. Salt Lake City, Utah.
11. ANDALEX RESOURCES. 1989. Vegetation information. Volume 1, chapter 3, section G (783.19), pages 58-62 in Mining and Reclamation Plan for Centennial Project, Andalex Resources. Utah Division of Oil, Gas and Mining Number ACT/007/019. Salt Lake City, Utah.
12. ANDERSON, B. A., AND A. H. HOLMGREN. 1976. Mountain plants of northeastern Utah. Utah Agricultural Experiment Station Circular 319. Logan, Utah. 148 pp.
13. ANDERSON, D. A., J. A. HENDERSON, AND R. L. MAUK. 1977. Indicator species for the habitat types of northern Utah. Utah State University, Department of Forestry and Outdoor Recreation publication. 76 pp.
14. ANDERSON, D. A., AND E. L. MINER. 1940. Some soil-plant relationships in the juniper-pinyon belt. Proceedings of Utah Academy of Science, Arts and Letters 17: 13-14.
15. ANDERSON, D. L. 1974. Ecological aspects of *Cercocarpus montanus* Raf. communities in central Utah. Unpublished thesis, Brigham Young University, Provo, Utah. 84 pp.
16. ANDERSON, F. K. 1987. Vegetation. Volume 1, part 7, pages 7-1-7-16 in Mining and Reclamation Plan for Banning Loadout Facility, Soldier Creek Coal Company. Utah Division of Oil, Gas and Mining Number ACT/007/034. Salt Lake City, Utah.
17. ANNABLE, C. R. 1985. Vegetation and flora of the Funeral Mountains, Death Valley National Monument, California-Nevada. University of Nevada Cooperative National Park Resources Studies Unit, National Park Service/University of Nevada Contribution Number 016/07. Las Vegas, Nevada. 188 pp.
18. ANNEAN, T. C. 1980. A characterization of Yampa and Green River ecosystems. Unpublished thesis, Utah State University, Logan. 143 pp.
19. ARMSTRONG, J. D. 1969. Vegetation of the Virgin Mountains, Clark County, Nevada. Unpublished thesis, University of Nevada, Las Vegas. 104 pp.
20. ASHBAUGH, J. H. 1939. A preliminary ecological-taxonomic survey of southern Washoe County. Unpublished thesis, University of Nevada, Reno. 19 pp.
21. ATWOOD, N. D. 1979. Management programs for plants on federal lands. Great Basin Naturalist Memoirs 3: 81-86.
22. AUCLAIR, A. N., A. BUCHARD, AND J. PAJACKOWSKI. 1976. Productivity relations in a *Carex*-dominated ecosystem. Oecologia 26: 9-31.
23. AUSTIN, D. D. 1987. Plant community changes within a mature pinyon-juniper woodland. Great Basin Naturalist 47: 96-99.
24. BARCOCK, W. H. 1977. Browse evaluation and survey techniques for the Uinta North Slope moose herd. Unpublished thesis, Utah State University, Logan.
25. BAILEY, R. G., AND C. T. CUSHWA. 1981. Ecoregions of North America [map]. USDI Fish and Wildlife Service, Washington, D.C.
26. BAILEY, R. W., C. L. FORSLING, AND R. J. BECRAFT. 1934. Floods and accelerated erosion in northern Utah. USDA Miscellaneous Publication 196. Washington, D.C. 21 pp.

27. BAKER, F. S. 1925. Aspen in the central Rocky Mountain region. USDA Department Bulletin 1291, Washington, D.C. 47 pp.
28. BAKER, F. S., C. F. KORSTIAN, AND N. J. FETHEROLF. 1921. Snowshoe rabbits and conifers in the Wasatch Mountains of Utah. *Ecology* 2: 304-310.
29. BAKER, W. L. 1981. Tuscarora Mountains grassland. Unpublished memorandum to Dave Livermore. Prepared for the Western Regional Office, The Nature Conservancy, San Francisco, California. 9 pp.
30. BAMBERG, S. A., A. WALLACE, E. M. ROMNEY, AND R. E. HUNTER. 1980. Further attributes of the perennial vegetation in the Rock Valley area of the northern Mojave Desert. *Great Basin Naturalist Memoirs* 4: 37-40.
31. BARKER, J. R. 1983. Vegetation information for the Deer Creek Mine. Volume 1/2, part 2, pages 2-101-2-130 in *Mining and Reclamation Plan for Deer Creek Mine*, Utah Power and Light Company. Utah Division of Oil, Gas and Mining Number ACT/015/018. Salt Lake City, Utah.
32. BARKER, J. R. 1984. Vegetation information for the Des-Bee-Dove Mines. Volume 1, part 2, pages 2-102-2-120 in *Mining and Reclamation Plan for Des-Bee-Dove Mine*, Utah Power and Light Company. Utah Division of Oil, Gas and Mining Number ACT/015/017. Salt Lake City, Utah.
33. BARKER, J. R. 1987. Vegetation information for the Wilberg Mine. Volume 1, part 2, pages 2-101-2-140 in *Mining and Reclamation Plan for Wilberg Mine*, Utah Power and Light Company. Utah Division of Oil, Gas and Mining Number ACT/015/019. Salt Lake City, Utah.
34. BARNES, W. C. 1926. The story of the range. USDA Forest Service. Reprinted in 1926 from Part 6 of the Hearings before a subcommittee of the Committee on Public Lands and Surveys, U.S. Senate, 69th Congress, 1st Session. 60 pp.
35. BARNEY, M. H. AND N. C. FRISHKNECHT. 1974. Vegetation changes following fire in the piñon-juniper types of west-central Utah. *Journal of Range Management* 27: 91-96.
36. BARNHURST, D. AND B. HOSEA. 1986. Utah big game range trend studies, 1985. Utah Division of Wildlife Resources Publication Number 86-5. Salt Lake City, Utah. 384 pp.
37. BARTOS, D. L. AND W. F. MUEGLER. 1982. Early succession following clearcutting of aspen communities in northern Utah. *Journal of Range Management* 35: 764-768.
38. BARTOS, D. L., F. R. WARD, AND G. S. INNIS. 1983. Aspen succession in the Intermountain West: a deterministic model. USDA Forest Service General Technical Report INT-153. Intermountain Forest and Range Experiment Station, Ogden, Utah. 60 pp.
39. BATES, C. G. 1924. Forest types in the central Rocky Mountains as affected by climate and soil. USDA Bulletin 1233. Washington, D.C. 152 pp.
40. BATES, J. W. 1982. Desert bighorn sheep habitat utilization in Canyonlands National Park, Utah. Unpublished thesis, Utah State University, Logan.
41. BEASLEY, R. S. AND J. O. KLEMEDSON. 1980. Ecological relationships of bristlecone pine. *American Midland Naturalist* 104: 242-252.
42. BEATH, O. A. 1943. Toxic vegetation growing on the Salt Wash Sandstone member of the Morrison Formation. *American Journal of Botany* 30: 698-707.
43. BEATH, O. A., C. S. GILBERT, AND H. F. EPPSON. 1940. The use of indicator plants in locating seleniferous areas in the western United States. III. Further studies. *American Journal of Botany* 27: 564-573.
44. BEATH, O. A., C. S. GILBERT, AND H. F. EPPSON. 1941. The use of indicator plants in locating seleniferous areas in western United States. IV. Progress report. *American Journal of Botany* 28: 887-900.
45. BEATLEY, J. C. 1965. Ecology of the Nevada Test Site. IV. Effects of the Sedan detonation on desert shrub vegetation in northeastern Yucca Flat, 1962-1965. United States Atomic Energy Commission Report UCLA 12-1571. University of California, School of Medicine, Los Angeles. 55 pp.
46. BEATLEY, J. C. 1966a. Ecological status of introduced brome grasses (*Bromus* spp.) in desert vegetation of southern Nevada. *Ecology* 47: 548-554.
47. BEATLEY, J. C. 1966b. Winter annual vegetation following a nuclear detonation in the northern Mojave Desert (Nevada Test Site). *Radiation Botany* 6: 69-82.
48. BEATLEY, J. C. 1974. Effects of rainfall and temperature on the distribution and behavior of *Larrea tridentata* (creosote-bush) in the Mojave Desert of Nevada. *Ecology* 55: 245-261.
49. BEATLEY, J. C. 1975. Climates and vegetation pattern across the Mojave/Great Basin desert transition of southern Nevada. *American Midland Naturalist* 93: 53-70.
50. BEATLEY, J. C. 1976. Vascular plants of the Nevada Test Site and central-southern Nevada: ecological and geographic distributions. Technical Information Center, Energy Research and Development Administration TID-26581. Prepared for the Division of Biomedical and Environmental Research, Energy Research and Development Administration. 297 pp.
51. BEATLEY, J. C. 1979. Shrub and tree data for plant associations across the Mojave/Great Basin Desert transition of the Nevada Test Site, 1963-1975. Unpublished report prepared for the U.S. Department of Energy Contract EY-76-S-02-2307. 52 pp.
52. BEATLEY, J. C. 1980. Fluctuations and stability in climax shrub and woodland vegetation of the Mojave, Great Basin and transition deserts of southern Nevada. *Israel Journal of Botany* 28: 149-168.
53. BEAVER CREEK COAL COMPANY. 1983a. Vegetation resources. Volume 2, section 9, pages 9-1-9-19a in *Mining and Reclamation Plan for Castle Valley Spur Coal Processing and Loadout Facility*, Beaver Creek Coal Company. Utah Division of Oil, Gas and Mining Number ACT/007/022.
54. BEAVER CREEK COAL COMPANY. 1983b. Vegetation resources. Volume 2, section 9, pages 9-1-9-29 in *Mining and Reclamation Plan for Huntington Canyon No. 4 Mine*, Beaver Creek Coal Company. Utah Division of Oil, Gas and Mining Number ACT/015/004. Salt Lake City, Utah.
55. BEAVER CREEK COAL COMPANY. 1986. Vegetation resources. Volume 2, section 9, pages 9-1-9-60 in *Mining and Reclamation Plan for Gordon Creek 3*

- and 6 Mines, Beaver Creek Coal Company. Utah Division of Oil, Gas and Mining Number ACT/007/017. Salt Lake City, Utah.
56. BEAVER CREEK COAL COMPANY 1988. Vegetation resources. Volume 3, chapter 9, sections 9.1–9.3, pages 9-1–9-36 in Mining and Reclamation Plan for Trail Mountain No. 9 Mine, Beaver Creek Coal Company. Utah Division of Oil, Gas and Mining Number ACT/015/009. Salt Lake City, Utah.
 57. BEAVER CREEK COAL COMPANY 1989. Vegetation resources. Volume 3, section 9, pages 9-1–9-39 in Mining and Reclamation Plan for Gordon Creek 2 and 7 Mines, Beaver Creek Coal Company. Utah Division of Oil, Gas and Mining Number ACT/007/016. Salt Lake City, Utah.
 58. BECK, D. E., D. M. ALLRED, J. R. MURDOCK, C. D. JORGENSEN, C. L. HAYWARD, AND W. W. TANNER. 1964. Nevada Test Site desert ecology. Proceedings of Utah Academy of Science, Arts and Letters 41: 202–210.
 59. BECKWITH, LIEUT. E. G. 1854. Report of explorations for a route for the Pacific railroad on the line of the forty-first parallel of North latitude. In: Reports of explorations and surveys, to ascertain the most practicable and economical route for a railroad from the Mississippi River to the Pacific Ocean. Vol. II. House of Representatives Executive Document 91, 33rd Congress, 2nd Session. 132 pp.
 60. BEESON, C. D. 1974. The distribution and synecology of Great Basin pinyon-juniper. Unpublished thesis, University of Nevada, Reno. 91 pp.
 61. BEETLE, A. A. 1960. A study of sagebrush. The section Tridentatae of *Artemisia*. University of Wyoming Agricultural Experiment Station Bulletin 368. Laramie, Wyoming. 83 pp.
 62. BELL, K. L. AND R. E. JOHNSON. 1980. Alpine flora of the Wassuk Range, Mineral County, Nevada. *Madroño* 27: 25–35.
 63. BELL, K. L. AND L. C. BLISS. 1979. Autecology of *Kobresia bellardii*: why winter snow accumulation limits local distribution. *Ecological Monographs* 49: 377–402.
 64. BENSON, S. B. 1935. A biological reconnaissance of Navajo Mountain, Utah. University of California Publications in Zoology 40: 439–456.
 65. BERMANT, D. J. 1982. Trend and condition of major range types of the Uinta National Forest, Utah, as determined by quantitative analysis of protoplot transects. Unpublished thesis, Utah State University, Logan.
 66. BESSEY, G. E. 1960. Aquatic plants of central Utah and their distribution. Unpublished thesis, Brigham Young University, Provo, Utah.
 67. BETANCOURT, J. L. 1984. Late Quaternary plant zonation and climate in southeastern Utah. *Great Basin Naturalist* 44: 1–35.
 68. BIDDULPH, O. 1933. The anatomy of the transition region of *Pinus edulis*. Unpublished thesis, Brigham Young University, Provo, Utah.
 69. BILLINGS, W. D. 1945. The plant associations of the Carson Desert region, western Nevada. *Butler University Botanical Studies* 7: 89–123.
 70. BILLINGS, W. D. 1949. The shadscale vegetation zone of Nevada and eastern California in relation to climate and soils. *American Midland Naturalist* 42: 87–109.
 71. BILLINGS, W. D. 1950. Vegetation and plant growth as affected by chemically altered rocks in the western Great Basin. *Ecology* 31: 62–74.
 72. BILLINGS, W. D. 1951. Vegetational zonation in the Great Basin of western North America. Pages 101–122 in *The ecological foundations of the regeneration of vegetation in arid zones*. UNESCO Series B (colloquies) 9.
 73. BILLINGS, W. D. 1954. Temperature inversions in the pinyon-juniper zone of a Nevada mountain range. *Butler University Botanical Studies* 12: 112–118.
 74. BILLINGS, W. D. 1978. Alpine phytogeography across the Great Basin. *Great Basin Naturalist Memoirs* 2: 105–117.
 75. BILLINGS, W. D., H. K. HUMPHREYS, AND J. B. DARLING. 1954. Environmental studies in the cold deserts and semi-deserts of the western Great Basin of North America. Unpublished report by Duke University, contract #DA 44-109-GM-1261, prepared for the U.S. Army. 112 pp.
 76. BISHOP, A. B. AND D. B. PORCELLA. 1980. Physical and ecological aspects of the upper Colorado River Basin. Pages 17–56 in W. Spofford, A. Parker, and A. Kneese, eds., *Energy development in the Southwest: problems of water, fish and wildlife in the upper Colorado Basin*. Resources for the future. Washington, D.C.
 77. BJERREGAARD, R. S., N. E. WEST, M. M. CALDWELL, AND H. F. MAYLAND. 1984. Standing crops and dynamics of phytomass and minerals in two salt desert shrub communities. *Great Basin Naturalist* 44: 327–337.
 78. BLACKBURN, W. H. 1967. Plant succession on selected habitat types in Nevada. Unpublished thesis, University of Nevada, Reno. 162 pp.
 79. BLACKBURN, W. H., R. E. ECKERT, JR., AND P. T. TUELLER. 1969. Vegetation and soils of the Crane Springs Watershed. Nevada Agricultural Experiment Station Bulletin R-55. Reno, Nevada. 63 pp.
 80. BLACKBURN, W. H., AND P. T. TUELLER. 1970. Pinyon and juniper invasion in black sagebrush communities in east-central Nevada. *Ecology* 51: 841–848.
 81. BLACKBURN, W. H., P. T. TUELLER, AND R. E. ECKERT, JR. 1968a. Vegetation and soils of the Mill Creek Watershed. Nevada Agricultural Experiment Station Bulletin R-43. Reno, Nevada. 69 pp.
 82. BLACKBURN, W. H., P. T. TUELLER, AND R. E. ECKERT, JR. 1968b. Vegetation and soils of the Crowley Creek Watershed. Nevada Agricultural Experiment Station Bulletin R-42. Reno, Nevada. 60 pp.
 83. BLACKBURN, W. H., P. T. TUELLER, AND R. E. ECKERT, JR. 1968c. Vegetation and soils of the Duckwater Watershed. Nevada Agricultural Experiment Station Bulletin R-40. Reno, Nevada. 76 pp.
 84. BLACKBURN, W. H., P. T. TUELLER, AND R. E. ECKERT, JR. 1969a. Vegetation and soils of the Cow Creek Watershed. Nevada Agricultural Experiment Station Bulletin R-49. Reno, Nevada. 80 pp.
 85. BLACKBURN, W. H., P. T. TUELLER, AND R. E. ECKERT, JR. 1969b. Vegetation and soils of the Coils Creek Watershed. Nevada Agricultural Experiment Station Bulletin R-45. Reno, Nevada. 81 pp.

86. BLACKBURN, W. H., P. T. TUELLER, AND R. E. ECKERT, JR. 1969c. Vegetation and soils of the Churchill Canyon Watershed. Nevada Agricultural Experiment Station Bulletin R-45. Reno, Nevada. 157 pp.
87. BLACKBURN, W. H., P. T. TUELLER, AND R. E. ECKERT, JR. 1969d. Vegetation and soils of the Pine and Mathew Canyon watersheds. Nevada Agricultural Experiment Station Bulletin R-46. Reno, Nevada. 111 pp.
88. BLACKBURN, W. H., P. T. TUELLER, AND R. E. ECKERT, JR. 1971. Vegetation and soils of the Rock Springs Watershed. Nevada Agricultural Experiment Station Bulletin R-83. Reno, Nevada. 116 pp.
89. BLACKHAWK COAL COMPANY. 1981. Vegetation resources. Chapter 9, section 9.2, pages 9-1-9-27 in Mining and Reclamation Plan for Willow Creek Mine, Blackhawk Coal Company. Utah Division of Oil, Gas and Mining Number ACT/007/002. Salt Lake City, Utah.
90. BLAISDELL, J. P., AND R. C. HOLMGREN. 1984. Managing intermountain rangelands-salt-desert shrub ranges. USDA Forest Service General Technical Report INT-163. Intermountain Forest and Range Experiment Station, Ogden, Utah.
91. BLAISDELL, J. P., R. B. MURRAY, AND E. D. MCARTHUR. 1982. Managing intermountain rangelands: sagebrush-grass ranges. USDA Forest Service General Technical Report INT-134. Intermountain Forest and Range Experiment Station, Ogden, Utah. 41 pp.
92. BLAKSLEY, J. A. 1987. Avian habitat relationships in riparian zones of northern Utah. Unpublished thesis, University of Idaho, Moscow.
93. BLANK, D. L. 1984. Forage quality comparison of burned and unburned aspen communities. Unpublished thesis, Utah State University, Logan.
94. BLEAK, A. T., N. C. FRISCHKNECHT, A. P. PLUMMER, AND R. E. ECKERT, JR. 1965. Problems in artificial and natural revegetation of the arid shadscale vegetation zone of Utah and Nevada. *Journal of Range Management* 18: 59-65.
95. BOLEN, E. G. 1962. Plant ecology of spring-fed salt marshes. Unpublished thesis, Utah State University, Logan.
96. BOLEN, E. G. 1964. Plant ecology of spring-fed salt marshes in western Utah. *Ecological Monographs* 34: 143-166.
97. BOSTICK, V. B., W. E. NILES, W. A. MCCLELLAN, E. H. OAKES, AND J. R. WILBANKS. 1975. Inventory of natural landmarks of the Great Basin, Vols. I and II. Unpublished report prepared for the USDI, National Park Service, by University of Nevada, Las Vegas. 690 pp.
98. BOUCEK, M. M. 1986. Vegetation survey at the Summit No. 1 Coal Mine, Summit County, Utah. Volume 1, section 783.19, appendix 783.19, pages 1-15 in Mining and Reclamation Plan for Summit No. 1 Mine, Summit Minerals Incorporated. Utah Division of Oil, Gas and Mining Number ACT/043/001. Salt Lake City, Utah.
99. BOWERS, J. E. 1982. The plant ecology of inland dunes in western North America. *Journal of Arid Environments* 5: 199-220.
100. BOWNS, J. E., AND N. E. WEST. 1976. Blackbrush (*Coleogyne ramosissima* Torr.) on southwestern Utah rangelands. Utah Agricultural Experiment Station Research Report 27. Logan, Utah. 27 pp.
101. BRACKEN, A. F. 1940. Dry farming as developed in the sagebrush zone. *Proceedings of Utah Academy of Science, Arts and Letters* 17: 25-32.
102. BRADLEY, W. G. 1964. The vegetation of the desert game range with special reference to the desert bighorn. Pages 43-67 in *Transactions of the Desert Bighorn Council*. Las Vegas, Nevada.
103. BRADLEY, W. G. 1965. A study of blackbrush community on the desert game range. Pages 56-61 in *Transactions of the Desert Bighorn Council*, 9th annual meeting, 6-8 April 1965, Redlands, California.
104. BRADLEY, W. G. 1966. Populations of two Sonoran Desert plants and deductions as to factors limiting their northward extension. *Southwestern Naturalist* 11: 395-401.
105. BRADLEY, W. G. 1967. A geographical analysis of the flora of Clark County, Nevada. *Journal of the Arizona Academy of Science* 4: 151-162.
106. BRADLEY, W. G. 1973. Ecological study of Zion National Park. Unpublished report prepared for the USDI, National Park Service. Springdale, Utah. 183 pp.
107. BRADLEY, W. G., AND J. E. DEACON. 1965. The biotic communities of southern Nevada. University of Nevada Prepublication Series 9. Desert Research Institute, Las Vegas, Nevada. 86 pp.
108. BRADLEY, W. G., AND J. E. DEACON. 1967. The biotic communities of southern Nevada. Nevada State Museum Anthropological Papers 13, Part IV. Carson City, Nevada. 69 pp.
109. BRANSON, F. A. 1966. Geographic distribution and factors affecting the distribution of salt desert shrubs in the United States. Pages 13-43 in *Proceedings from the Salt Desert Shrub Symposium*, 1-4 August 1966. USDI, Bureau of Land Management, Cedar City, Utah.
110. BRANSON, F. A. 1985. Vegetation changes on western rangelands. Range Monograph 2. Society for Range Management, Denver, Colorado. 76 pp.
111. BRANSON, F. A., R. F. MILLER, AND I. S. MCQUEEN. 1967. Geographic distribution and factors affecting the distribution of salt desert shrubs in the United States. *Journal of Range Management* 29: 287-296.
112. BRETERNITZ, D. A., AND D. W. MARTIN. 1973. Report of Dolores River project reconnaissance, 1972-1973. Unpublished report submitted to the USDI, National Park Service, Midwest Archaeological Center, Lincoln, Nebraska.
113. BRIGGS, G. M. 1978. A study of sedge-dominated areas in the Uinta Mountains. Unpublished thesis, Utah State University, Logan. 89 pp.
114. BRIGGS, G. M., AND J. A. MACMAHON. 1982. Structure of alpine plant communities near King's Peak, Uinta Mountains, Utah. *Great Basin Naturalist* 42: 50-59.
115. BRIGGS, G. M., AND J. A. MACMAHON. 1983. Alpine and subalpine wetland plant communities of the Uinta Mountains, Utah. *Great Basin Naturalist* 43: 523-530.

116. BRITTON, C. M., AND M. H. RALPHS. 1979. Use of fire as a management tool in sagebrush ecosystems. Pages 101-109 in *The Sagebrush Ecosystem: A Symposium*, April 1978, Utah State University, Logan.
117. BROTHERSON, J. D. 1974. A vegetation analysis of areas involved in the proposed Four Seasons project. Pages 60-104 in *Environmental report on proposed Four Seasons Project*. Unpublished report prepared by Brigham Young University Center for Health and Environmental Studies for Four Seasons, Inc.
118. BROTHERSON, J. D. 1978. Vegetative and wildlife assessment of the Jordan Aqueduct Extension, Bonneville Unit, Central Utah Project. Unpublished report prepared for the Rocky Mountain Research Co. and USDI, Bureau of Reclamation, Provo, Utah. 45 pp.
119. BROTHERSON, J. D. 1981. Aquatic and semiaquatic vegetation of Utah Lake and its bays. *Great Basin Naturalist Memoirs* 5: 68-84.
120. BROTHERSON, J. D. 1987. Plant community zonation in response to soil gradients in a saline meadow near Utah Lake, Utah County, Utah. *Great Basin Naturalist* 47: 322-333.
121. BROTHERSON, J. D., D. L. ANDERSON, AND L. A. SZYSKA. 1984. Habitat relations of *Cercocarpus montanus* (true mountain mahogany) in central Utah. *Journal of Range Management* 37: 321-324.
122. BROTHERSON, J. D., AND S. J. BARNES. 1984. Habitat relationships of *Glaux maritima* in central Utah. *Great Basin Naturalist* 44: 299-309.
123. BROTHERSON, J. D., AND K. J. BROTHERSON. 1979. Ecological and community relationships of *Eriogonum corymbosum* (Polygonaceae) in the Uinta Basin, Utah. *Great Basin Naturalist* 39: 177-191.
124. BROTHERSON, J. D., AND W. T. BROTHERSON. 1981. Grazing impacts on the sagebrush communities of central Utah. *Great Basin Naturalist* 41: 335-340.
125. BROTHERSON, J. D., J. G. CARMAN, AND L. A. SZYSKA. 1984. Stem-diameter-age relationships of *Tamarix ramosissima* in central Utah. *Journal of Range Management* 37: 362-364.
126. BROTHERSON, J. D., J. N. DAVIES, AND L. GREENWOOD. 1980. Diameter-age relationships of two species of mountain mahogany. *Journal of Range Management* 33: 367-370.
127. BROTHERSON, J. D., AND W. E. EVENSON. 1983. Vegetation communities surrounding Utah Lake and its bays. *Utah Lake Vegetation Studies*. Unpublished report prepared for the Utah Division of Wildlife Resources and USDI, Bureau of Reclamation, Provo, Utah. 401 pp.
128. BROTHERSON, J. D., AND D. FIELD. 1987. *Tamarix*: impacts of a successful weed. *Rangelands* 9: 110-112.
129. BROTHERSON, J. D., AND W. J. MASSLIH. 1985. Vegetation patterns in relation to slope position in the Castle Cliffs area of southern Utah. *Great Basin Naturalist* 45: 535-541.
130. BROTHERSON, J. D., AND C. MORDEN. 1979. Vegetation of Utah Lake shoreline and bays. Map in four parts. Press Publishing Limited, Provo, Utah.
131. BROTHERSON, J. D., G. NEBEKER, M. SKOUGARD, AND J. FAIRCHILD. 1978. Plants of Navajo National Monument. *Great Basin Naturalist* 33: 19-30.
132. BROTHERSON, J. D., AND S. T. OSAYANDE. 1980. Mineral concentrations in true mountain mahogany and Utah juniper and in associated soils. *Journal of Range Management* 33: 182-185.
133. BROTHERSON, J. D., AND K. P. PRICE. 1984. Naturalization and habitat relationships of bitter nightshade (*Solanum dulcamara*) in central Utah. *Great Basin Naturalist* 44: 317-323.
134. BROTHERSON, J. D., K. P. PRICE, AND L. O'ROURKE. 1987. Age in relationship to stem circumference and diameter in cliffrose (*Cowania mexicana* var. *stansburiana*) in central Utah. *Great Basin Naturalist* 47: 334-338.
135. BROTHERSON, J. D., L. L. RASMUSSEN, AND R. D. BLACK. 1986. Comparative habitat and community relationships of *Atriplex confertifolia* and *Sarcobatus vermiculatus* in central Utah. *Great Basin Naturalist* 46: 348-357.
136. BROTHERSON, J. D., S. R. RUSHFORTH, AND J. R. JOHANSEN. 1983. Effects of long-term grazing on cryptogam crust cover in Navajo National Monument, Arizona. *Journal of Range Management* 36: 579-581.
137. BROTHERSON, J. D., AND V. WINKEL. 1986. Habitat relationships of saltcedar (*Tamarix ramosissima*) in central Utah. *Great Basin Naturalist* 46: 535-541.
138. BROWN, D. E., C. H. LOWE, AND C. P. PASE. 1979. A digitized classification system for the biotic communities of North America, with community (series) and association examples for the Southwest. *Journal of the Arizona-Nevada Academy of Science* 14: 1-16.
139. BROWN, D. E., AND C. H. LOWE. 1980. Biotic communities of the Southwest. USDA Forest Service General Technical Report RM-78. Rocky Mountain Forest and Range Experiment Station, Fort Collins, Colorado.
140. BROWN, L. L. 1962. Establishment of forage plants on difficult salt-desert range sites. Unpublished thesis, University of Nevada, Reno.
141. BRUN, J. M. 1962. A comparison of the line-interception, point frame and distance measurement methods for analyzing desert shrub vegetation. Unpublished thesis, Utah State University, Logan.
142. BRUNER, A. D. 1979. Predicting success of prescribed fires in pinyon-juniper woodland in Nevada. USDA Forest Service Research Paper INT-219. Intermountain Forest and Range Experiment Station, Ogden, Utah. 11 pp.
143. BUCHANAN, B. A., K. T. HARPER, AND N. C. FRISCHKNECHT. 1978. Allelopathic effects of bur buttercup tissue on the germination and growth of various grasses and forbs in vitro and in soil. *Great Basin Naturalist* 38: 90-96.
144. BUCHANAN, H. 1960. The plant ecology of Bryce Canyon National Park, Utah. Unpublished dissertation, University of Utah, Salt Lake City.
145. BUCHANAN, H., AND K. T. HARPER. 1981. Forests of Bryce Canyon National Park: consequences of past management policies and recommendations for the future. Unpublished final report, part III, Project CX-1200-S-B016 (typescript).
146. BUDY, J. D., AND J. A. YOUNG. 1979. Historical use of Nevada's pinyon-juniper woodlands. *Journal of Forest History* 23: 112-121.

147. BUNDERSON, E. D., D. J. WEBER, AND D. L. NELSON. 1986. Diseases associated with *Juniperus osteosperma* and a model for predicting their occurrence with environmental site factors. *Great Basin Naturalist* 46: 427-440.
148. BURKE, M. H. 1934. Plant distribution studies in the Wellsville Range, Utah. Unpublished thesis, Utah State Agricultural College, Logan. 33 pp.
149. BURR, G. O. 1931. Native vegetation of the prehistoric Lake Bonneville Basin. *Journal of the American Society of Agronomy* 23: 407-413.
150. BUTLER, J. R., AND J. L. ENGLAND. 1979. Vegetation map of the southeastern Uinta Basin, Utah and Colorado. USDI Geological Survey Miscellaneous Investigative Series I-1141. Washington, D.C.
151. BUZZARD, R. F., JR. 1981. Comparison of two traditional techniques for determining range trend and recommendations for improved procedures. Unpublished thesis, Utah State University, Logan.
152. BYE, R. A. 1972. Ethnobotany of the southern Paiute Indians in the 1870's. *In*: Great Basin Cultural Ecology, a Symposium, Reno, Nevada. Research Publications in the Social Sciences 8.
153. CALDWELL, M. M., AND N. E. WEST. 1972. The plant ecology of Utah's desert rangelands. *Utah Science* 33: 14-15.
154. CALL, C. A., AND J. R. BARKER. 1980. Vegetation survey of U.S. Fuel Company property, Hiawatha, Utah. Volume 3, chapter 9, section 9.9, appendix IX-1, pages 1-80 *in* Mining and Reclamation Plan for Hiawatha Mines Complex, U.S. Fuel Company. Utah Division of Oil, Gas and Mining Number ACT/007/011. Salt Lake City, Utah.
155. CALLISON, J., JR., AND J. D. BROTHERTON. 1985. Habitat relationships of the blackbush community (*Coleogyne ramosissima*) of southwestern Utah. *Great Basin Naturalist* 45: 321-326.
156. CALLISON, J., JR., J. D. BROTHERTON, AND J. E. BOWNS. 1985. The effects of fire on the blackbush (*Coleogyne ramosissima*) community of southwestern Utah. *Journal of Range Management* 38: 535-538.
157. CAMPBELL, V. O. 1977. Certain edaphic and biotic factors affecting vegetation in the shadscale community of the Kaiparowits area. Unpublished thesis, Brigham Young University, Provo, Utah. 59 pp.
158. CANNON, H. L. 1960. The development of botanical methods of prospecting for uranium on the Colorado Plateau. USDI Geological Survey Bulletin 1085-A. Washington, D.C. 50 pp.
159. CANON, S. K. 1985. Habitat selection, foraging behavior, and dietary nutrition of elk in burned vs. unburned aspen forests. Unpublished thesis, Utah State University, Logan.
160. CARMAN, J. G., AND J. D. BROTHERTON. 1982. Comparisons of sites infested and not infested with salt cedar (*Tamarix pentandra*) and Russian olive (*Elaeagnus angustifolia*). *Weed Science* 30: 360-364.
161. CARTER, K. S. 1981. Analysis of trend and methods used to determine trend on southern Utah National Forest. Unpublished thesis, Utah State University, Logan.
162. CASTLE, E. S. 1955. The vegetation and its relationship to the dune soils of the pink sand dunes of Kane County, Utah. Unpublished thesis, Brigham Young University, Provo, Utah.
163. CEDAR CREEK ASSOCIATES INCORPORATED. 1987. Draft vegetation information for the Alton coal mining project. Volume 6, chapter 3, appendix 3.6-B, pages 1-41 *in* Mining and Reclamation Plan for Alton Mine, Utah International Incorporated. Utah Division of Oil, Gas and Mining Number ACT/025/003. Salt Lake City, Utah.
164. CHABOT, B. F., AND W. D. BILLINGS. 1972. Origins and ecology of the Sierran alpine flora and vegetation. *Ecological Monographs* 42: 163-199.
165. CHAMBERLAIN, R. V. 1911. The ethnobotany of the Gosiute Indians. *Proceedings of the Academy of Science of Philadelphia* 63: 24-99.
166. CHAMBERS, J. C. 1979. The effects of grazing on salt desert shrub species survival during a period of below average precipitation. Unpublished thesis, Utah State University, Logan.
167. CHAPMAN, V. J. 1960. Salt marshes and salt deserts of the world. *Plant Science Monograph*. Interscience Publishers, Inc., New York. 392 pp.
168. CHOATE, G. A. 1965. Forests in Utah. USDA Forest Service Resource Bulletin INT-4. Intermountain Forest and Range Experiment Station, Ogden, Utah. 61 pp.
169. CHRISTENSEN, E. M. 1949. The ecology and geographic distribution of oakbrush (*Quercus gambelii*) in Utah. Unpublished thesis, University of Utah, Salt Lake City. 70 pp.
170. CHRISTENSEN, E. M. 1950. Distributional observations of oakbrush (*Quercus gambelii* Nutt.) in Utah. *Proceedings of Utah Academy of Science, Arts and Letters* 27: 22-25.
171. CHRISTENSEN, E. M. 1955. Ecological notes on the mountain brush in Utah. *Proceedings of Utah Academy of Science, Arts and Letters* 32: 107-111.
172. CHRISTENSEN, E. M. 1957. Photographic history of the mountain brush on "Y" Mountain, central Utah. *Proceedings of Utah Academy of Science, Arts and Letters* 34: 154-155 (abstract).
173. CHRISTENSEN, E. M. 1958. Growth rates and vegetation changes in the oak-maple brush in lower Provo Canyon, Utah. *Proceedings of Utah Academy of Science, Arts and Letters* 35: 167-168.
174. CHRISTENSEN, E. M. 1959a. A climatic study of some northern desert shrub communities. *Proceedings of Utah Academy of Science, Arts and Letters* 36: 174 (abstract).
175. CHRISTENSEN, E. M. 1959b. A comparative study of the climates of mountain brush, pinyon-juniper, and sagebrush communities in Utah. *Proceedings of Utah Academy of Science, Arts and Letters* 36: 174-175 (abstract.)
176. CHRISTENSEN, E. M. 1961a. The *Agropyron-Poa* bunchgrass vegetation in central Utah. *Proceedings of Utah Academy of Science, Arts and Letters* 38: 113 (abstract.)
177. CHRISTENSEN, E. M. 1961b. The deciduous tree communities of central Utah. *Bulletin of the Ecological Society of America* 42: 62-63 (abstract.)
178. CHRISTENSEN, E. M. 1962. The rate of naturalization of *Tamarix* in Utah. *Americal Midland Naturalist* 68: 51-57.

179. CHRISTENSEN, E. M. 1963a. Naturalization of Russian olive (*Elaeagnus angustifolia* L.) in Utah. *American Midland Naturalist* 70: 133-137.
180. CHRISTENSEN, E. M. 1963b. The foothill bunchgrass vegetation of central Utah. *Ecology* 44: 156-158.
181. CHRISTENSEN, E. M. 1964a. Changes in composition of a *Bromus tectorum*-*Sporobolus cryptandrus*-*Aristida longiseta* community following fire. *Proceedings of Utah Academy of Science, Arts and Letters* 41: 53-57.
182. CHRISTENSEN, E. M. 1964b. Succession in a mountain brush community in central Utah. *Proceedings of Utah Academy of Science, Arts and Letters* 41: 10-13 (Erratum 41[2]: ii).
183. CHRISTENSEN, E. M. 1967a. Bibliography of Utah botany and wildland conservation. Brigham Young University Science Bulletin, Biological Series 9(1). Provo, Utah. 135 pp.
184. CHRISTENSEN, E. M. 1967b. Bibliography of Utah botany and wildland conservation, No. II. *Proceedings of Utah Academy of Science, Arts and Letters* 44: 545-566.
185. CHRISTENSEN, E. M. AND J. D. BROTHIERSON. 1972. Preliminary botanical survey of the Bonneville Unit of the Central Utah Project. Pages 5-134 in E. M. Christensen et al., eds., *Preliminary survey of the biota of the Bonneville Unit of the Central Utah Project*. Unpublished report prepared for the USDI, Bureau of Reclamation, Provo, Utah, by Brigham Young University Center for Health and Environmental Studies, Provo, Utah.
186. CHRISTENSEN, E. M. AND B. F. HARRISON. 1961. Ecological study area at Lily Lake in the Uinta Mountains, Utah. *Proceedings of Utah Academy of Science, Arts and Letters* 38: 36-49.
187. CHRISTENSEN, E. M. AND M. A. HUTCHINSON. 1965. Historical observations of the ecology of Rush and Tooele Valleys, Utah. *Proceedings of Utah Academy of Science, Arts and Letters* 42: 90-105.
188. CHRISTENSEN, E. M. AND H. B. JOHNSON. 1964. Pre-settlement vegetation and vegetational change in three valleys in central Utah. *Brigham Young University Science Bulletin, Biological Series* 4(4): 1-16.
189. CHRISTENSEN, E. M. AND S. L. WELSH. 1963. Pre-settlement vegetation of the valleys of western Summit and Wasatch Counties, Utah. *Proceedings of Utah Academy of Science, Arts and Letters* 40: 163-174.
190. CHRISTIAN, R. 1962. Plant geography of the Beaver Dam Mountains. Unpublished thesis, University of Utah, Salt Lake City. 153 pp.
191. CLEMENT, R. C. 1979. Culture and species endangerment. *Great Basin Naturalist Memoirs* 3: 11-16.
192. CLOKEY, I. W. 1951. Flora of the Charleston Mountains, Clark County, Nevada. University of California Press, Berkeley.
193. CLOVER, E. U. AND L. JOTTER. 1944. Floristic studies in the canyon of the Colorado and tributaries. *American Midland Naturalist* 32: 591-642.
194. COLE, N. J. 1968. Mule deer utilization of rehabilitated Nevada rangelands. Unpublished thesis, University of Nevada, Reno.
195. COLES, F. H. AND J. C. PEDERSON. 1967. Utah big game range inventory, 1966. Utah Division of Wildlife Resources Publication 67-1. Salt Lake City, Utah. 171 pp.
196. COLES, F. H. AND J. C. PEDERSON. 1968. Utah big game range inventory, 1967. Utah Division of Wildlife Resources Publication 68-2. Salt Lake City, Utah. 120 pp.
197. COLES, F. H. AND J. C. PEDERSON. 1969. Utah big game range inventory, 1968. Utah Division of Wildlife Resources Publication 69-2. Salt Lake City, Utah. 164 pp.
198. COLES, F. H. AND J. C. PEDERSON. 1970. Utah big game range inventory, 1969. Utah Division of Wildlife Resources Publication 70-1. Salt Lake City, Utah. 127 pp.
199. COLLINS, P. D. 1980. Comparative life history and floral characteristics of desert and montane plant communities in Utah. Unpublished thesis, Brigham Young University, Provo, Utah. 163 pp.
200. COLLINS, P. D. 1983. Vegetation and reclamation of the Wellington Coal Cleaning Plant. Volume 3, appendix H, pages 1-44 in *Mining and Reclamation Plan for Wellington Prep Plant, Kaiser Coal Corporation*. Utah Division of Oil, Gas and Mining Number ACT/007/012. Salt Lake City, Utah.
201. COLLINS, P. D. AND K. T. HARPER. 1980. Vegetation map of the Mt. Nebo complex and San Pitch Mountains, Utah. Brigham Young University Press, Provo, Utah.
202. COLLINS, P. D., K. T. HARPER, AND B. K. PENDLETON. 1983. Comparative life history and floral characteristics of desert and mountain floras in Utah. *Great Basin Naturalist* 43: 385-393.
203. COLLINS, W. B. 1977. Diet composition and activities of elk on different habitat segments in the lodgepole pine type, Uinta Mountains. Unpublished thesis, Utah State University, Logan.
204. COLTIARP, G. B. AND N. E. WEST. 1966. Effects of surface soil treatments on soil, water, and vegetation in Utah's east desert area. Pages 88-97 in *Proceedings from Salt Desert Shrub Symposium, 1-4 August 1966*. USDI, Bureau of Land Management, Cedar City, Utah.
205. COMMITTEE ON ENVIRONMENTAL QUALITY. 1970. Preserving Nevada's environmental heritage. Unpublished final report prepared for the Governor's Natural Resources Council by the Department of Conservation and Natural Resources, Carson City, Nevada.
206. COOK, C. W. 1977. Effects of season and intensity of use on desert vegetation. *Utah Agricultural Experiment Station Bulletin* 483. Logan, Utah. 57 pp.
207. COOK, C. W. AND L. E. HARRIS. 1950. The nutritive content of the grazing sheep's diet on the summer and winter ranges of Utah. *Utah Agricultural Experiment Station Bulletin* 312. Logan, Utah. 66 pp.
208. COOK, C. W. AND R. HURST. 1962. A quantitative measure of plant association on ranges in good and poor condition. *Journal of Range Management* 15: 266-273.
209. COOK, C. W. AND C. E. LEWIS. 1963. Competition between big sagebrush and seeded grasses on foothill ranges in Utah. *Journal of Range Management* 16: 245-250.

210. CO-OP MINING COMPANY. 1985. Vegetation. Volume 2, chapter 9, sections 9.1-9.3, pages 9-1-9-10, plus appendix 9-A, pages 9A-1-9A-9 in Mining and Reclamation Plan for Bear Canyon Mine, Co-Op Mining Company. Utah Division of Oil, Gas and Mining Number ACT/015/025. Salt Lake City, Utah.
211. CO-OP MINING COMPANY. 1989. Vegetation. Volume 2, chapter 9, sections 9.1-9.3, pages 9-1-9-10, plus appendix 9-A, pages 9A-1-9A-9 in Mining and Reclamation Plan for Trail Canyon Mine, Co-Op Mining Company. Utah Division of Oil, Gas and Mining Number ACT/015/021. Salt Lake City, Utah.
212. COOPER, S. V., P. T. MUELLER, AND R. B. MURRAY. 1978. Habitat-type classification of pinyon-juniper woodlands in the Great Basin. Unpublished report prepared for the Agricultural Experiment Station, Reno, Nevada. 60 pp.
213. COTTAM, W. P. 1926. An ecological study of the flora of Utah Lake, Utah. Unpublished dissertation, University of Chicago. 46 pp.
214. COTTAM, W. P. 1929a. Man as a biotic factor illustrated by recent floristic and physiographic changes at the Mountain Meadows, Washington County, Utah. *Ecology* 10: 361-364.
215. COTTAM, W. P. 1929b. Some phytogeographical features of Utah. *Proceedings of Utah Academy of Science, Arts and Letters* 6: 6-7.
216. COTTAM, W. P. 1930. Some unusual floristic features of the Uintah Mountains, Utah. *Proceedings of Utah Academy of Science, Arts and Letters* 7: 48-49.
217. COTTAM, W. P. 1937. Has Utah lost claim to the Lower Sonoran zone? *Science* 85: 563-564.
218. COTTAM, W. P. 1947. Is Utah Sahara bound? *Bulletin of the University of Utah* 37(11).
219. COTTAM, W. P. 1954. Prevernal leafing of aspen in Utah mountains. *Journal of the Arnold Arboretum* 35: 239-250.
220. COTTAM, W. P. 1961. Our renewable wild lands—a challenge. University of Utah Press, Salt Lake City. 182 pp.
221. COTTAM, W. P. 1976. The impact of man on the flora of the Bonneville Basin. University of Utah Research Paper 76-1. Salt Lake City, Utah.
222. COTTAM, W. P., AND F. R. EVANS. 1945. A comparative study of the vegetation of grazed and ungrazed canyons of the Wasatch Range, Utah. *Ecology* 26: 171-181.
223. COTTAM, W. P., AND G. STEWART. 1938. Range conservation in Wasatch County, Utah. Unpublished cooperative western range survey report prepared for USDA Forest Service, Intermountain Forest and Range Experiment Station, Ogden, Utah.
224. COTTAM, W. P., AND G. STEWART. 1940. Plant succession as a result of grazing and of meadow desiccation by erosion since settlement in 1862. *Journal of Forestry* 38: 613-626.
225. COTTAM, W. P., J. M. TUCKER, AND R. DROBNICK. 1959. Some clues to Great Basin postpluvial climates provided by oak distribution. *Ecology* 40: 361-377.
226. COVILLE, F. V. 1892. Descriptions of new plants from southern California, Nevada, Utah, and Arizona. *Proceedings of the Biological Society of Washington* 7: 65-80.
227. COYNE, P. L. AND C. W. COOK. 1970. Seasonal carbohydrate reserve cycles in eight desert range species. *Journal of Range Management* 13: 438-444.
228. CRITCHFIELD, W. B., AND G. L. ALLENBAUGH. 1969. The distribution of Pinaceae in and near northern Nevada. *Madroño* 19: 12-27.
229. CROFT, A. R., L. WOODWARD, AND D. A. ANDERSON. 1943. Measurement of accelerated erosion on range-watershed land. *Journal of Forestry* 4: 112-116.
230. CROWTHER, E. G., AND K. T. HARPER. 1965. Vegetational and edaphic characteristics associated with aspen "strips" in Big Cottonwood Canyon. *Proceedings of Utah Academy of Science, Arts and Letters* 42: 222-230.
231. CURREY, D. R. 1965. An ancient bristlecone pine stand in eastern Nevada. *Ecology* 46: 564-566.
232. DAINES, L. L. 1917. On the flora of Great Salt Lake. *American Naturalist* 51: 499-506.
233. DASTRUP, B. C. 1963. Vegetational changes of the Uinta Basin since settlement. Unpublished thesis, Brigham Young University, Provo, Utah. 118 pp.
234. DAVIS, J. B. 1971. Estimating plant production from soil and floristic correlates in Hot Creek Valley, Nevada. Unpublished thesis, University of Nevada, Reno.
235. DAVIS, J. N. 1976. Ecological investigations in *Cercocarpus ledifolius* Nutt. communities of Utah. Unpublished thesis, Brigham Young University, Provo, Utah.
236. DEBYLE, N. V. 1973. Establishment report for Morris Creek Research Natural Area within the Davis County Experimental Watershed. Unpublished report prepared for USDA National Forest Service, Washington, D.C. 7 pp.
237. DEAN, K. C., R. HAVENS, AND K. T. HARPER. 1969. Chemical and vegetative stabilization of a Nevada copper porphyry mill tailing. USDI, Bureau of Mines Report of Investigations 7261. Salt Lake City, Utah. 14 pp.
238. DEEVER, C. F., AND H. S. HASKELL. 1955. Pinyon resources—distribution of pinyon (*Pinus edulis*), yield and resin potentialities, Navajo-Hopi reservations, Arizona-Utah. University of Arizona Press, Tucson. 37 pp.
239. DELLENBAUGH, F. S. 1926 (1908). A canyon voyage: the narrative of the second Powell expedition down the Green-Colorado River from Wyoming, and the expeditions on land, in the years 1871 and 1872. G. P. Putnam's Sons, New York. 277 pp.
240. DESCHAMP, J. A., P. J. URNESS, AND D. D. AUSTIN. 1979. Summer diets of mule deer from lodgepole pine habitats. *Journal of Wildlife Management* 43: 154-161.
241. DICE, L. R. 1939. The Sonoran biotic province. *Ecology* 20: 118-129.
242. DINA, S. J. 1970. An evaluation of physiological response to water stress as a factor influencing the distribution of six woody species in Red Butte Canyon, Utah. Unpublished dissertation, University of Utah, Salt Lake City. 117 pp.
243. DINA, S. J., L. G. KLIKOFF, AND M. B. KEDDINGTON. 1973. Seasonal water potential patterns in the mountain brush zone, Utah. *American Midland Naturalist* 89: 234-239.

244. DITTBERNER, P. L., AND M. R. OLSON. 1983. The plant information network (PIN) data base: Colorado, Montana, North Dakota, Utah, and Wyoming. USDI Fish and Wildlife Service FWS/OBS 83/36. Western Energy and Land Use Team, Fort Collins, Colorado. 786 pp.
245. DIXON, H. 1935. Ecological studies on the high plateaus of Utah. *Botanical Gazette* 97: 272-320.
246. DOUGLAS, C. L. 1984. Management significance of the flora and physiognomy of the Cottonwood Mountains, Death Valley National Monument, California. University of Nevada Cooperative National Park Resources Studies Unit Report 022/07. Las Vegas, Nevada.
247. DOUGLAS, C. L. 1985. Management significance of vegetation and flora of the Funeral Mountains, Death Valley National Monument, California/Nevada. University of Nevada Cooperative National Park Resources Studies Unit Report 016/08. Las Vegas, Nevada.
248. DOUGLAS, C. L. 1986a. Management significance of plant succession after fire, Hunter Mountain, Death Valley National Monument. University of Nevada Cooperative National Park Resources Studies Unit Report 034/02. Las Vegas, Nevada.
249. DOUGLAS, C. L. 1986b. Management significance of soil analyses in relation to vegetation in the Cottonwood Mountains, Death Valley National Monument, California. University of Nevada Cooperative National Park Resources Studies Unit Report 036/02. Las Vegas, Nevada.
250. DROBNICK, R. 1958. The ecology of a relic hybrid oak in the Great Basin area of Utah. Unpublished thesis, University of Utah, Salt Lake City. 96 pp.
251. DROBNICK, R. 1960. Utah big game range inventory, 1959. Utah Division of Wildlife Resources Departmental Information Bulletin 60-1. Salt Lake City, Utah. 59 pp.
252. DROBNICK, R. 1961. Utah big game range inventory, 1960. Utah Division of Wildlife Resources Departmental Information Bulletin 61-3. Salt Lake City, Utah. 18 pp.
253. DUFF, D. A. 1979. Riparian habitat recovery on Big Creek, Rich County, Utah. Page 91 in O. B. Cope, ed., *Proceedings of the Forum—Grazing and Riparian/Stream Ecosystems*. Trout Unlimited, Inc., Denver, Colorado. 94 pp.
254. DUTTON, C. E. 1880. Report of the geology of the high plateaus of Utah, atlas. USDI Geographical and Geological Survey. U.S. Government Printing Office, Washington, D.C. 307 pp.
255. DZUREE, R. S. 1980. Carbon isotope ratios of soil organic matter and their use in assessing community composition changes in Curlew Valley, Utah. Unpublished thesis, Utah State University, Logan.
256. EAGLEY, V. L. 1980. Rangeland resource inventory of the six county area of Utah. Unpublished thesis, Utah State University, Logan.
257. EARTH ENVIRONMENTAL CONSULTANTS INCORPORATED. 1981. Soil survey and vegetation inventory of the proposed Sunnyside Mine site and extension of the Pinnacle Mine site. Volume 2, appendix M, pages 254-322 in *Mining and Reclamation Plan for Centennial Project, Andalex Resources*. Utah Division of Oil, Gas and Mining Number ACT/007/019. Salt Lake City, Utah.
258. EASTMOND, R. J. 1968. Vegetative changes in a mountain brush community through eighteen years. Unpublished thesis, Brigham Young University, Provo, Utah. 64 pp.
259. EASTWOOD, A. 1896. Report on a collection of plants from San Juan County, in southeastern Utah. *Proceedings of the California Academy of Science, Series 2*, 6: 271-328.
260. EATON, F. D. 1971. Soil moisture depletion, actual and potential evapotranspiration in an Engelmann spruce-subalpine fir forest. Unpublished thesis, Utah State University, Logan, Utah.
261. ECKERT, R. E. 1954. A study of competition between whitesage and halogeton in Nevada. Unpublished thesis, University of Nevada, Reno.
262. ECKERT, R. E., A. T. BLEAK, J. H. ROBERTSON, AND E. A. NAPHAN. 1961. Responses of *Agropyron cristatum*, *A. desertorum*, and other range grasses to different sites in eastern Nevada. *Ecology* 42: 775-783.
263. EL-GHONEMY, A. A. 1980. Socioecological and soil-plant studies of the natural vegetation in the northern Mojave Desert—Great Basin interface. *Great Basin Naturalist Memoirs* 4: 71-86.
264. EL-GHONEMY, A. A., A. WALLACE, AND E. M. ROMNEY. 1980a. Frequency distribution of numbers of perennial shrubs in the northern Mojave Desert. *Great Basin Naturalist Memoirs* 4: 32-36.
265. EL-GHONEMY, A. A., A. WALLACE, AND E. M. ROMNEY. 1980b. Multivariate analysis of the vegetation in a two-desert interface. *Great Basin Naturalist Memoirs* 4: 40-57.
266. EL-GHONEMY, A. A., A. WALLACE, E. M. ROMNEY, AND W. VALENTINE. 1980c. A phytosociological study of a small desert area in Rock Valley, Nevada. *Great Basin Naturalist Memoirs* 4: 57-71.
267. ELLISON, L. 1941. Notes on ecology of subalpine range plants in central Utah. *Proceedings of Utah Academy of Science, Arts and Letters* 18: 12 (abstract).
268. ELLISON, L. 1948. Subalpine vegetation of the Wasatch Plateau. Unpublished dissertation, University of Minnesota, Mimeoapolis.
269. ELLISON, L. 1949a. The ecological basis for judging condition and trend on mountain range land. *Journal of Forestry* 47: 786-795.
270. ELLISON, L. 1949b. Establishment of vegetation on depleted subalpine range as influenced by micro-environment. *Ecological Monographs* 19: 95-121.
271. ELLISON, L. 1954. Subalpine vegetation of the Wasatch Plateau, Utah. *Ecological Monographs* 24: 89-184.
272. ELLISON, L. 1959. Role of plant succession in range improvement. *American Association for the Advancement of Science, Symposium Volume on Grasslands*. Publication 53: 307-321.
273. ELLISON, L. 1960. Influence of grazing on plant succession of rangelands. *Botanical Review* 26: 1-78.
274. ELLISON, L. AND C. M. ALDOUS. 1952. Influence of pocket gophers on vegetation of subalpine grassland in central Utah. *Ecology* 33: 177-186.
275. ELLISON, L., A. R. CROFT, AND R. W. BAILEY. 1951. Indicators of condition and trend on high-range watersheds of the Intermountain region. *USDA Agricultural Handbook* 19. Intermountain Forest and Range Experiment Station, Ogden, Utah. 66 pp.

276. ELLISON, L. AND W. R. HOUSTON. 1958. Production of herbaceous vegetation in openings and under canopies of western aspen. *Ecology* 39: 337-345.
277. EMPIRE ENGINEERING AND LAND SURVEYING. 1986. Vegetation resources. Volume 2, chapter 9, sections 9.0-9.3, pages 9-1-9-19, plus table 9-14, pages 9-35-9-41 in Mining and Reclamation Plan for Black Jack Mine No. 1, New Tech Mining Corporation. Utah Division of Oil, Gas and Mining Number ACT/019/004. Salt Lake City, Utah.
278. ENGLAND, J. L. 1979. Measured and inferred moisture gradient relationships: a study of a montane steppe in central Utah. Unpublished thesis, Brigham Young University, Provo, Utah. 36 pp.
279. ENGLE, D. M., C. D. BONHAM, AND L. E. BARTEL. 1983. Ecological characteristics and control of Gambel oak. *Journal of Range Management* 36: 363-365.
280. ERDMAN, K. S. 1961. Classification and distribution of the native trees of Utah. Unpublished thesis, Brigham Young University, Provo, Utah. 221 pp.
281. ESPLIN, A. C., J. E. GREAVES, AND L. A. STODDART. 1937. A study of Utah's winter range. Utah Agricultural Experiment Station Bulletin 277. Logan, Utah. 49 pp.
282. EVANS, C. C. 1986. The relationship of cattle grazing to sage grouse use of meadow habitat on the Sheldon National Wildlife Refuge. Unpublished thesis, University of Nevada, Reno.
283. EVANS, F. R. 1936. A comparative study of the vegetation of a grazed and an ungrazed canyon of the Wasatch Range. Unpublished thesis, University of Utah, Salt Lake City.
284. EVANS, P. A. 1925. A plant ecology study in Utah. Unpublished dissertation, University of Chicago.
285. EVANS, P. A. 1926. An ecological study in Utah. *Botanical Gazette* 82: 253-285.
286. EVENSON, W. E., J. D. BROTHERTSON, AND R. B. WILCOX. 1980. Relationship between environmental and vegetational parameters for understory and open-area communities. *Great Basin Naturalist* 40: 167-174.
287. EVERETT, R. L. 1968. Use of the cottonwood in an investigation of the recent history of a flood plain. *American Journal of Science* 266: 417-439.
288. EVERETT, R. L. 1983. Understory seed rain in tree-harvested and unharvested pinyon-juniper sites. *Journal of Environmental Management* 17: 349-358.
289. EVERETT, R. L. 1985. Great Basin pinyon and juniper communities and their response to management. Pages 53-61 in *Proceedings of the Cultural, Physical and Biological Characteristics of Range Livestock Industry in the Great Basin Symposium*, 38th annual meeting of the Society for Range Management, 11-14 February 1985, Salt Lake City, Utah.
290. EVERETT, R. L. 1986. Understory seed rain in harvested pinyon-juniper woodlands. *Great Basin Naturalist* 46: 706-710.
291. EVERETT, R. L. AND S. KONIAK. 1981. Understory vegetation in fully stocked pinyon-juniper stands. *Great Basin Naturalist* 41: 467-475.
292. EVERETT, R. L. AND S. H. SHARROW. 1983. Response of understory species to tree harvesting and fire in pinyon-juniper woodlands. USDA Forest Service General Technical Report INT-157. Intermountain Forest and Range Experiment Station, Ogden, Utah.
293. EVERETT, R. L., S. H. SHARROW, AND R. O. MEEUWIC. 1983. Pinyon-juniper woodland understory distribution patterns and species associations. *Bulletin of the Torrey Botanical Club* 110: 454-463.
294. EVERETT, R. L. AND S. H. SHARROW. 1985. Understory response to tree harvesting in singleleaf pinyon and Utah juniper. *Great Basin Naturalist* 45: 105-112.
295. EVERETT, R. L., S. H. SHARROW, AND D. THIRAN. 1986. Soil nutrient distribution under and adjacent to singleleaf pinyon crowns. *Soil Science Society of America Journal* 50: 788-792.
296. EVERETT, R. L. AND K. WARD. 1984. Early plant succession on pinyon-juniper controlled burns. *Northwest Science* 58: 57-68.
297. EVERETT, B. L. 1980. Vegetation and sediment migration in the Henry Mountains region, Utah. Pages 208-239 in M. Picard, ed., *Proceedings Utah Geological and Mineral Survey—1980 Henry Mountains Symposium*. Geological Association, Salt Lake City, Utah.
298. FAUTIN, R. W. 1941. Biotic communities of the northern desert shrub biome in western Utah. Unpublished dissertation, University of Illinois, Urbana.
299. FAUTIN, R. W. 1946. Biotic communities of the northern desert shrub biome in western Utah. *Ecological Monographs* 16: 251-310.
300. FEARS, R. D. 1966. The effects of intensity and season of use on recovery of desert range plants. Unpublished thesis, Utah State University, Logan.
301. FENEMORE, R. M., JR. 1970. Plant succession in a receding lake bed in the western Great Basin. Unpublished thesis, University of Nevada, Reno.
302. FERGUSON, C. W. 1962. Annual ring studies of desert shrubs. Unpublished progress report financed by National Science Foundation Grant G-5568. 5 pp.
303. FERNANDEZ, D. A., AND M. M. CALDWELL. 1975. Phenology and dynamics of root growth of three cool semi-desert shrubs under field conditions. *Journal of Ecology* 63: 703-714.
304. FOLLIOTT, P. F., AND W. P. CLARY. 1982. Understory-overstory vegetation relationships: an annotated bibliography. USDA Forest Service General Technical Report INT-136. Intermountain Forest and Range Experiment Station, Ogden, Utah. 39 pp.
305. FIREMAN, M., AND H. E. HAYWARD. 1952. Indicator significance of some shrubs in the Escalante Desert, Utah. *Botanical Gazette* 114: 143-155.
306. FISHER, M. 1978. A survey of plants and animals of Hill and Wendover Bombing Ranges, western Utah. Unpublished report prepared for the Department of Wildlife Science, Utah State University, Logan. 70 pp.
307. FLOWERS, S. 1934. Vegetation of the Great Salt Lake region. *Botanical Gazette* 95: 353-418.
308. FLOWERS, S. 1942. Plant life of the Great Salt Lake region. *News Bulletin of the Mineralogical Society of Utah* 3(3): 36-56.

309. FLOWERS, S. 1959. Vegetation of Glen Canyon. University of Utah Anthropological Papers 40: 21-61.
310. FLOWERS, S. 1960. Vegetation of Flaming Gorge Reservoir Basin. Pages 1-98 in *Studies of the flora and fauna of Flaming Gorge Reservoir Basin, Utah and Wyoming*. University of Utah Anthropological Papers 48. Salt Lake City, Utah.
311. FOLKS, F. N. 1969. Evaluation of five methods for sampling desert and wetland vegetation. Unpublished thesis, Utah State University, Logan.
312. FORSLING, C. L., AND E. V. STORM. 1929. The utilization of browse forage as summer range for cattle in southwestern Utah. USDA Circular 62. Washington, D.C. 29 pp.
313. FORSLING, C. L. 1931. A study of the influence of herbaceous plant cover on surface run-off and soil erosion in relation to grazing on the Wasatch Plateau in Utah. USDA Agricultural Technical Bulletin 220. 71 pp.
314. FOSBERG, F. R. 1938. The Lower Sonoran in Utah. *Science* 87: 39-40.
315. FOSTER, R. H. 1968. Distribution of the major plant communities in Utah. Unpublished dissertation, Brigham Young University, Provo, Utah. 124 pp.
316. FOSTER, R. M. 1980. Threatened and endangered plant inventory: Wells Resource Area, Nevada. Unpublished final report prepared for USDI, Bureau of Land Management, Elko, Nevada, under contract YA-512-CT9-125, by Inter-Mountain Research.
317. FREEMAN, J., AND J. L. MAHONEY. 1977. Geothermal areas in Nevada. The distribution of vascular plants near the thermal springs surveyed. *Mentzelia* 3: 7-14.
318. FRISCHKNECHT, N. C. 1975. Native faunal relationships within the pinyon-juniper ecosystem. Pages 55-65 in *Pinyon-Juniper Ecosystem: A Symposium*, Utah State University, Logan.
319. FRISCHKNECHT, N. C., AND L. E. HARRIS. 1968. Grazing intensities and systems on crested wheatgrass in central Utah: response of vegetation and cattle. U.S. Department of Agriculture Technical Bulletin 1388. Washington, D.C. 47 pp.
320. GARDINER, H. G. 1984. Dynamics of arid land, perennial plant populations with an examination of potential causal agents. Unpublished dissertation, Utah State University, Logan.
321. GATES, D. H. 1956. Ecology of plant distribution on the salt-deserts of Utah. Unpublished dissertation, Utah State University, Logan.
322. GATES, D. H., L. A. STODDART, AND C. W. COOK. 1956. Soil as a factor influencing plant distribution on salt-deserts of Utah. *Ecological Monographs* 26: 155-175.
323. GENWAL COAL COMPANY. 1988. Vegetation reference area. Volume 3, chapter 9, item 9-2, pages 1-8 in *Mining and Reclamation Plan for Crandall Canyon Mine*, Genwal Coal Company. Utah Division of Oil, Gas and Mining Number ACT/015/032. Salt Lake City, Utah.
324. GERMANO, D. J., AND D. N. LAWHEAD. 1986. Species diversity and habitat complexity: Does vegetation organize vertebrate communities in the Great Basin? *Great Basin Naturalist* 46: 711-720.
325. GIFFORD, G. F., AND F. E. BUSBY, EDs. 1975. The pinyon-juniper ecosystem: a symposium. Utah State University, Logan. 194 pp.
326. GIUNTA, B. C. 1979. Utah big game range inventory, 1977. Utah Division of Wildlife Resources Publication Number 79-3. Salt Lake City, Utah. 257 pp.
327. GIUNTA, B. C. 1980. Utah big game range inventory, 1978. Utah Division of Wildlife Resources Publication Number 80-9. Salt Lake City, Utah. 333 pp.
328. GIUNTA, B. C. 1982. Utah big game range inventory, 1980. Utah Division of Wildlife Resources Publication Number 82-5. Salt Lake City, Utah. 262 pp.
329. GIUNTA, B., D. BARNHURST, B. HOSEA, T. HOWICK, AND J. TEEGARDEN. 1986. Utah big game range trend studies, 1984. Utah Division of Wildlife Resources Publication Number 86-6. Salt Lake City, Utah. 443 pp.
330. GIUNTA, B. C., AND R. MUSCLOW. 1983a. Utah big game range trend studies, 1981. Utah Division of Wildlife Resources Publication Number 83-1. Salt Lake City, Utah. 189 pp.
331. GIUNTA, B. C., AND R. MUSCLOW. 1983b. Utah big game range trend studies, 1982. Utah Division of Wildlife Resources Publication Number 83-2. Salt Lake City, Utah. 421 pp.
332. GIUNTA, B. C., AND R. MUSCLOW. 1984. Utah big game range trend studies, 1983. Utah Division of Wildlife Resources Publication Number 84-3. Salt Lake City, Utah. 399 pp.
333. GIUNTA, B. C., R. STEVENS, K. R. JORGENSEN, AND A. P. PLUMMER. 1978. Antelope bitterbrush, an important wildland shrub. Utah Division of Wildlife Research Publication 78-12. Salt Lake City, Utah. 47 pp.
334. GLEASON, H. A., AND A. CRONQUIST. 1964. The natural geography of plants. Columbia University Press, New York. 420 pp.
335. GOEBEL, C. J. 1960. Effect of range condition and plant vigor upon the production and nutritive value of forage. Unpublished dissertation, Utah State University, Logan.
336. GOETZ, H. 1968. Vegetation and soil responses to nitrogen fertilization on different range sites. Unpublished dissertation, Utah State University, Logan.
337. GONZALES, M. H. 1964. Patterns of livestock behavior and forage utilization as influenced by environmental factors on a summer mountain range. Unpublished dissertation, Utah State University, Logan.
338. GOODRICH, S. 1981. A floristic study of central Nevada. Unpublished thesis, Brigham Young University, Provo, Utah. 400 pp.
339. GOODWIN, D. L. 1963. Vegetation and soils relationships of the shade-scale zone in Utah. Pages 24-25 in *Proceedings of the American Society of Range Management*, 12-15 February 1963, Rapid City, South Dakota.
340. GRAHAM, E. H. 1937. Botanical studies in the Uinta Basin of Utah and Colorado. *Annals of the Carnegie Museum*, Vol. 26. Carnegie Institute, Pittsburgh, Pennsylvania. 432 pp.
341. GRAYBOSCH, R. A., AND H. BUCHANAN. 1983. Vegetative types and endemic plants of the Bryce Canyon Breaks. *Great Basin Naturalist* 43: 701-712.
342. GREENWOOD, L. R., AND J. D. BROTHERSON. 1978. Ecological relationships between pinyon-juniper and true mountain mahogany stands in the Uinta Basin, Utah. *Journal of Range Management* 31: 164-167.

343. GRIFFITHS, D. 1902. Forage conditions in the northern border of the Great Basin. USDA Bureau of Plant Industry Bulletin 15.
344. GRUELL, G. E., S. BUNTING, AND L. NEUENSCHWANDER. 1985. Influence of fire on curlleaf mountain-mahogany in the Intermountain West. Pages 58–72 in J. E. Lotan and J. K. Brown, compilers, Fire's effects on wildlife habitat—symposium proceedings. USDA Forest Service General Technical Report INT-186. Intermountain Forest and Range Experiment Station, Ogden, Utah.
345. HAAS, R. H., H. L. MORTON, AND P. J. TORELL. 1962. Influence of soil salinity and 2,4-D treatments on establishment of desert wheatgrass and control of halogeton and other annual weeds. Journal of Range Management 15: 205–210.
346. HALL, H. H. 1954. The impact of man on the vegetation and soil of the Upper Valley Allotment, Garfield County, Utah. Unpublished thesis, University of Utah, Salt Lake City.
347. HALL, H. H. 1971. Ecology of a subalpine meadow of the Aquarius Plateau, Garfield and Wayne Counties, Utah. Unpublished dissertation, Brigham Young University, Provo, Utah.
348. HALVERSON, R. M. 1974. ERTS-1 imagery for vegetation mapping and phenology detection in Nevada. Unpublished thesis, University of Nevada, Reno.
349. HANKS, L. M. 1982. The pollinator community of a sand dune ecosystem. Unpublished thesis, University of Nevada, Reno.
350. HANSEN, D. J. 1977. Interrelations of valley vegetation, stream regimen, soils, and solar irradiation along the Rock Creek in the Uinta Mountains of Utah. Unpublished dissertation, University of Michigan, Ann Arbor.
351. HANSEN, D. S., P. DAYANANDAN, P. B. KAUFMAN, AND J. D. BROTHIERSON. 1976. Ecological adaptations of salt marsh grass, *Distichlis spicata* (Gramineae), and environmental factors affecting its growth and distribution. American Journal of Botany 63: 635–650.
352. HANSEN, H. P. 1947. Postglacial vegetation of the northern Great Basin. American Journal of Botany 34: 164–171.
353. HANSON, C. A. 1962. Perennial *Atriplex* of Utah and the northern deserts. Unpublished thesis, Brigham Young University, Provo, Utah.
354. HANSON, H. C. 1950. Ecology of the grassland. II. Botanical Review 16: 283–360.
355. HANSON, W. R. 1939. The ecology of *Agropyron inerme* on protected and heavily grazed range land in Cache Valley, Utah. Unpublished thesis, Utah State University, Logan. 33 pp.
356. HANSON, W. R., AND L. A. STODDART. 1940. Effects of grazing upon bluebunch wheat grass. Journal of the American Society of Agronomy 32: 279–289.
357. HARNER, R. F., AND K. T. HARPER. 1973. Mineral composition of grassland species of the eastern Great Basin in relation to stand productivity. Canadian Journal of Botany 51: 2037–2046.
358. HARNER, R. F., AND K. T. HARPER. 1976. The role of area, heterogeneity and favorability in plant species diversity of pinyon-juniper ecosystems. Ecology 57: 1254–1263.
359. HARNISS, R. O., AND K. T. HARPER. 1982. Tree dynamics in seral and stable aspen stands in central Utah. USDA Forest Service Research Paper INT-297. Intermountain Forest and Range Experiment Station, Ogden, Utah. 7 pp.
360. HARPER, K. T. 1959. Vegetational changes in a shade-scale-winterfat plant association during twenty-three years of controlled grazing. Unpublished thesis, Brigham Young University, Provo, Utah. 72 pp.
361. HARPER, K. T. 1967. The vegetational environment of the Bear River Number 2 archaeological site. University of Utah Anthropological Paper 87. Salt Lake City, Utah.
362. HARPER, K. T. 1976a. Permanent plot native vegetation studies. Pages 20–43 in A. C. Hill et al., eds., Vegetation–air pollution investigations in the vicinity of Four Corners and San Juan power plants, New Mexico. University of Utah Research Institute Environmental Studies Laboratory, Salt Lake City.
363. HARPER, K. T. 1976b. Work plan: ecological impact study of weather modification in the Uinta Mountains, Utah. Unpublished report prepared for Utah Division of Water Resources, Salt Lake City, and the USDI, Bureau of Reclamation Office of Atmospheric Resources Management, Denver, Colorado. 46 pp.
364. HARPER, K. T. 1977. The Utah ecology project: ecological impact of weather modification studies in the Uinta Mountains, Utah. Unpublished interim report prepared for Utah Division of Water Resources, Salt Lake City, and the USDI, Bureau of Reclamation, Denver, Colorado.
365. HARPER, K. T. 1978. The Uinta ecology study: biennial report. Unpublished report prepared for Utah Division of Water Resources, Salt Lake City, and USDI, Bureau of Reclamation, Denver, Colorado. 24 pp.
366. HARPER, K. T. 1979. Some reproductive and life history characteristics of rare plants and implications for management. Great Basin Naturalist Memoirs 3: 129–138.
367. HARPER, K. T. 1985. Predicting successional rates in Utah aspen forests. Pages 96–100 in Proceedings of the 1985 Society of American Foresters National Convention, 28–31 July 1985, Bethesda, Maryland. 445 pp.
368. HARPER, K. T., AND C. S. CLIMER. 1985. Factors affecting productivity and compositional stability of *Artemisia* steppes in Idaho and Utah. U.S.A. Pages 592–594 in Proceedings of XVth International Grassland Conference, August, Kyoto, Japan.
369. HARPER, K. T., D. C. FREEMAN, W. K. OSTLER, AND L. G. KLIKOFF. 1978. The flora of Great Basin mountain ranges: diversity, sources and dispersal ecology. Great Basin Naturalist Memoirs 2: 81–103.
370. HARPER, K. T., AND R. A. JAYNES. 1986. Some edaphic and compositional characteristics of *Artemisia tridentata* and associated plant communities in southeastern Utah. Pages 265–272 in E. D. McArthur and B. L. Welch, compilers, Proceedings—Symposium on the Biology of *Artemisia* and *Chrysothamnus*, 9–13 July 1984, Provo, Utah.

- USDA Forest Service General Technical Report INT-200. Intermountain Research Station, Ogden, Utah.
371. HARPER, K. T., J. R. MURDOCK, AND S. L. WELSH. 1974. Botanical evaluation of proposed power plant sites in Garfield and Wayne Counties, Utah. Unpublished report prepared for Environmental Systems Department of Westinghouse Corporation, Salt Lake City, Utah.
372. HARPER, K. T., J. R. MURDOCK, AND S. L. WELSH. 1975. The vegetation of Salt Wash Area, Wayne County, Utah. Unpublished report prepared for Environmental Systems Department of Westinghouse Corporation, Salt Lake City, Utah. 30 pp.
373. HARPER, K. T., W. K. OSTLER, AND D. C. ANDERSON. 1978. The Utah ecology project: ecological impact of weather modification studies in the Uinta Mountains, Utah. Unpublished special report prepared for Utah Division of Water Resources, Salt Lake City, and USDI, Bureau of Reclamation, Denver, Colorado.
374. HARPER, K. T., W. K. OSTLER, AND K. B. MCKNIGHT. 1979. The Uinta ecology study, interim report. Unpublished report to Utah Division of Water Resources, Salt Lake City, and USDI, Bureau of Reclamation, Denver, Colorado. 76 pp.
375. HARPER, K. T., W. K. OSTLER, K. B. MCKNIGHT, AND D. L. HUNTER. 1981a. Potential ecological impacts of snow pack augmentation in the Uinta Mountains, Utah. Unpublished report prepared for USDI, Bureau of Reclamation, Denver, Colorado. 291 pp.
376. HARPER, K. T., W. K. OSTLER, K. B. MCKNIGHT, AND D. L. HUNTER. 1981b. Effects of late-lying snow on an alpine hermland in the Uinta Mountains. Pages 179–203 in K. T. Harper, W. K. Ostler, K. B. McKnight, and D. L. Hunter, eds., Potential ecological impact of snow pack augmentation in the Uinta Mountains of Utah. Unpublished report prepared for USDI, Bureau of Reclamation, Denver, Colorado.
377. HARPER, K. T., AND J. L. REVEAL, EDS. 1978. Intermountain biogeography: a symposium. *Great Basin Naturalist Memoirs* 2: 1–265.
378. HARPER, K. T., S. C. SANDERSON, AND E. D. MCARTHUR. 1987. Vegetation communities of Zion National Park. Pages 191–196 in University of Wyoming National Park Service Research Center eleventh annual report. Laramie, Wyoming.
379. HARPER, K. T., F. J. WAGSTAFF, AND L. M. KUNZLER. 1985. Biology and management of the Gambel oak vegetative type: a literature review. USDA Forest Service General Technical Report INT-179. Intermountain Forest and Range Experiment Station, Ogden, Utah.
380. HARPER, K. T., S. WAITE, AND C. LAMB. 1973. Vegetation of the proposed power generating plant sites. Pages 1–33 in Evaluation of three alternative power plant sites in Utah and Wyoming for the Utah Power and Light Company, Salt Lake City, Utah.
381. HARPER, K. T., B. W. WOOD, AND J. D. BROTHERRSON. 1974. A vegetational analysis of areas involved in the proposed Four Seasons Project. Pages 60–104 in unpublished environmental report on proposed Four Seasons Project prepared for Brigham Young University Center for Health and Environmental Studies, Provo, Utah.
382. HARPER, K. T., R. A. WOODWARD, AND K. B. MCKNIGHT. 1980. Interrelationships among precipitation, vegetation, and streamflow in the Uinta Mountains, Utah. *Encyclopedia* 57: 56–86.
383. HARRIS, M. L. 1926. An ecological study of Timpanogos Creek, from Aspen Grove to Wildwood. Unpublished thesis, Brigham Young University, Provo, Utah. 82 pp.
384. HARRISON, B. F. 1980. Botanical survey, threatened, endangered and other rare plants of the Schell Resource Area, Ely District, Nevada. Unpublished report prepared for USDI, Bureau of Land Management, by Inter-Mountain Research Corporation, Provo, Utah. 101 pp.
385. HASSAN, M. A. 1983. Effects of wildfire on seed-rain and soil. Seed reserve dynamics of a good condition sagebrush-grass rangeland in central Utah. Unpublished thesis, Utah State University, Logan.
386. HASSAN, M. A. AND N. E. WEST. 1984. Soil seed reserve dynamics in burned and unburned sagebrush-grass vegetation of central Utah. *Bulletin of Ecological Society America* 65: 180.
387. HAYWARD, C. L. 1943. Biotic communities of the coniferous forests of the southern Wasatch and Uinta Mountains, Utah. Unpublished thesis, University of Illinois, Urbana.
388. HAYWARD, C. L. 1945. Biotic communities of the southern Wasatch and Uinta Mountains, Utah. *Great Basin Naturalist* 6: 1–124.
389. HAYWARD, C. L. 1948. Biotic communities of the Wasatch Chaparral, Utah. *Ecological Monographs* 18: 473–506.
390. HAYWARD, C. L. 1952. Alpine biotic communities of the Uinta Mountains, Utah. *Ecological Monographs* 22: 93–120.
391. HAYWARD, C. L., D. E. BECK, AND W. W. TANNER. 1958. Zoology of the Upper Colorado River Basin. Part I, The biotic communities. *Brigham Young University Science Bulletin, Biological Series* 1(3): 1–74.
392. HEINZE, D. H., R. E. ECKERT, AND P. T. TUELLER. 1962. The vegetation and soils of the Steptoe Watershed. Unpublished report prepared for USDI, Bureau of Land Management. 40 pp.
393. HENDERSON, J. A. 1978. ECOSYM—potential vegetation classification. Appendix report 7 in J. A. Henderson, L. S. Davis, and E. M. Ryberg, eds., ECOSYM: an ecosystem classification and data storage system for natural resources management. Unpublished report prepared for Utah State University, Logan. 12 pp.
394. HENDERSON, J. A., R. L. MAUK, D. L. ANDERSON, T. A. DAVIS, AND T. J. KECK. 1977. Preliminary forest habitat types of the Uinta Mountains, Utah. Unpublished report prepared for Department of Forestry and Outdoor Recreation, Utah State University, Logan. 94 pp.
395. HENDERSON, J. A., S. A. SIMON, AND S. B. HARTVIGSEN. 1977. Plant community types and habitat types of the Price District Manti-La Sal National Forest. Unpublished report prepared for Department of Forestry and Outdoor Recreation, Utah State University, Logan.

396. HENDERSON, J. A., AND N. E. WEST. 1977. ECOSYM—vegetation classification. Appendix report 6 in J. A. Henderson and L. S. Davis, eds., ECOSYM: a classification and data storage system for natural resources management. Unpublished report prepared for Utah State University, Logan. 89 pp.
397. HENNINGSON, DURHAM, & RICHARDSON INC. 1981a. Preliminary FEIS, grazing. M-X Environmental Technical Report 40. Unpublished report prepared for USAF, Norton Air Force Base, California. 165 pp.
398. HENNINGSON, DURHAM, & RICHARDSON INC. 1981b. Preliminary FEIS, native vegetation. M-X Environmental Technical Report 14. Unpublished report prepared for USAF, Norton Air Force Base, California. 197 pp.
399. HENNINGSON, DURHAM & RICHARDSON, INC. 1981c. Preliminary FEIS, aquatic habitats and biota. M-X Environmental Technical Report 16. Unpublished report prepared for USAF, Norton Air Force Base, California. 70 pp.
400. HERMAN, F. 1953. A growth record of the Utah juniper. *Journal of Forestry* 51: 193–195.
401. HESSING, M. B., C. D. JOHNSON, AND R. P. BALDA. 1982. Early secondary succession of a piñon-juniper woodland in a northern Arizona powerline corridor (*Juniperus monosperma*, *Pinus edulis*). *Southwestern Naturalist* 27: 1–9.
402. HIEBERT, R. D. AND J. L. HAMRICK. 1984. An ecological study of bristlecone pine (*Pinus longaeva*) in Utah and eastern Nevada. *Great Basin Naturalist* 44: 487–494.
403. HIGGINS, L. C. 1967. A flora of the Beaver Dam Mountains. Unpublished thesis, Brigham Young University, Provo, Utah. 305 pp.
404. HILL, A. C., K. T. HARPER, AND W. H. EDWARDS. 1972. Ecological evaluation of proposed routes for the Huntington-Sigurd power transmission line. Unpublished report prepared for Utah Power and Light Company, Salt Lake City, Utah.
405. HILTON, J. W. 1941. Effects of certain micro-ecological factors on the germinability and early development of *Eurota lanata*. *Northwest Science* 15: 86–92.
406. HOFFMAN, W. J. 1877. The distribution of vegetation in portions of Nevada and Arizona. *American Naturalist* 11: 336–343.
407. HOLLAND, J. 1982. A floristic and vegetation analysis of the Newberry Mountains, Clark County, Nevada. Unpublished thesis, University of Nevada, Las Vegas. Reproduced in the Lake Mead Report Series by University of Nevada Cooperative National Park Resources Studies Unit, Las Vegas, Nevada.
408. HOLLAND, J. S., W. E. NILES, AND P. J. LEARY. 1979. Vascular plants of the Lake Mead National Recreation Area. Lake Mead Technical Report 3. University of Nevada Cooperative National Park Resources Studies Unit, Las Vegas, Nevada. 223 pp.
409. HOLLAND, J. S., W. E. NILES, AND D. R. SCHRAM. 1980. A guide to the threatened and endangered vascular plants of the Lake Mead National Recreation Area. Lake Mead Technical Report 4. University of Nevada Cooperative National Park Resources Studies Unit, Las Vegas, Nevada. 75 pp.
410. HOLMGREN, A. H. 1948. Handbook of the vascular plants of the northern Wasatch. Lithotype Process Company, San Francisco. 202 pp.
411. HOLMGREN, A. H. 1962. The vascular plants of the Green River from the Flaming Gorge to Split Mountain Gorge. Unpublished report prepared for the National Park Service by Utah State University, Logan. 40 pp.
412. HOLMGREN, A. H. 1979. Strategies for preservation of rare plants. *Great Basin Naturalist Memoirs* 3: 95–100.
413. HOLMGREN, A. H., AND J. L. REVEAL. 1966. Checklist of the vascular plants of the Intermountain Region. USDA Forest Service Research Paper INT-32. Intermountain Forest and Range Experiment Station, Ogden, Utah. 160 pp.
414. HOLMGREN, R. C. 1975. The desert experimental range description history and program. Pages 18–22 in *Arid Shrubland Proceedings of the Third Workshop of the United States/Australia Rangelands Panel*, Tucson, Arizona, 1973.
415. HOLMGREN, R. C., AND S. F. BREWSTER, JR. 1972. Distribution of organic matter reserve in a desert shrub community. USDA Forest Service Research Paper INT-130. Intermountain Forest and Range Experiment Station, Ogden, Utah.
416. HOLMGREN, R. C., AND S. S. HUTCHINGS. 1972. Salt desert shrub response to grazing use. Pages 153–164 in *Wildland shrubs—their biology and utilization*. USDA Forest Service General Technical Report INT-GTR-1. Intermountain Forest and Range Experiment Station, Ogden, Utah.
417. HOSEA, B., AND D. BARNHURST. 1988. Utah big game range trend studies, 1986. Utah Division of Wildlife Resources Publication Number 88-5. Salt Lake City, Utah. 305 pp.
418. HOUSTON, W. R. 1951. A preliminary study of some factors affecting forage production in the aspen type of central Utah. Unpublished thesis, University of Utah, Salt Lake City.
419. HOUSTON, W. R. 1954. A condition guide for aspen ranges of Utah, Nevada, southern Idaho, and western Wyoming. USDA Forest Service Research Paper 32. Intermountain Forest and Range Experiment Station, Ogden, Utah. 25 pp.
420. HUBBARD, K. G. 1980. Relating fire occurrence to weather conditions on the Great Basin rangelands. *Journal of Range Management* 33: 360–362.
421. HUFF, C. L. 1962. Utah big game range inventory, 1961. Utah Division of Wildlife Resources Departmental Information Bulletin Number 62-5. Salt Lake City, Utah. 45 pp.
422. HUFF, C. L. 1963. Utah big game range inventory, 1962. Utah Division of Wildlife Resources Departmental Information Bulletin Number 63-2. Salt Lake City, Utah. 161 pp.
423. HUFF, C. L., AND R. BLOTTER. 1964. Utah big game range inventory, 1963. Utah Division of Wildlife Resources Departmental Information Bulletin Number 64-2. Salt Lake City, Utah. 110 pp.
424. HUFF, C. L., AND J. E. BOWNS, JR. 1965. Utah big game range inventory, 1964. Utah Division of Wildlife Resources Publication Number 65-1. Salt Lake City, Utah. 111 pp.
425. HUFF, C. L., AND F. H. COLES. 1966. Utah big game range inventory, 1965. Utah Division of Wildlife

- Resources Publication Number 66-3. Salt Lake City, Utah. 96 pp.
426. HULL, A. C., JR., AND M. K. HULL. 1974. Presettlement vegetation of Cache Valley, Utah and Idaho. *Journal of Range Management* 27: 27-29.
427. HUNT, C. B., P. AVERITT, AND R. L. MILLER. 1953. Geology and geography of the Henry Mountains region, Utah. USDI Geological Survey Professional Paper 228. Washington, D.C.
428. HUTCHENS, S. K., AND K. T. HARPER. 1965. A method for determining grazing indicators in aspen communities. *Proceedings of Colorado-Wyoming Academy of Science, Arts and Letters* 42: 319.
429. IBRAHIM, K. 1962. Plant communities of the shade-scale zone in Grand County as related to soil and geology. *Proceedings of Utah Academy of Science, Arts and Letters* 37-39: 191-193.
430. IBRAHIM, K. M. 1963. Ecological factors influencing plant distribution in the shade-scale zone of southeastern Utah. Unpublished dissertation, Utah State University, Logan.
431. IBRAHIM, K. M., N. E. WEST, AND D. L. GOODWIN. 1972. Phytosociological characteristics of perennial *Atriplex*-dominated vegetation of southeastern Utah. *Vegetatio* 24: 13-22.
432. IRVINE, J. R. 1970. Riparian environmental-vegetation interrelationships along the Escalante River, Glen Canyon National Recreation Area, Utah. Unpublished thesis, Utah State University, Logan. 82 pp.
433. IRVINE, J. R., AND N. E. WEST. 1976. Riparian environmental-vegetation interrelationships along the lower Escalante River, Glen Canyon National Recreation Area, Utah. Unpublished report prepared for the National Park Service, Utah. 82 pp.
434. IRVINE, J. R., AND N. E. WEST. 1979. Riparian tree species distribution and succession along the lower Escalante River, Utah. *Southwestern Naturalist* 24: 331-346.
435. ISAACSON, H. E. 1967. Ecological provinces within the pinyon-juniper type of the Great Basin and Colorado Plateau. Unpublished thesis, Utah State University, Logan.
436. IVES, R. L. 1942. Atypical subalpine environments. *Ecology* 23: 89-96.
437. JACKSON, L. E. 1985. Floristic analysis of the distribution of ephemeral plants in treeline areas of the western U.S. *Arctic and Alpine Research* 17: 251-260.
438. JACKSON, L. E., AND L. C. BLISS. 1984. Phenology and water relations of three plant life forms in a dry tree-lined meadow. *Ecology* 65: 1302-1314.
439. JAREK, L. B. 1986. A photographic history of vegetation changes on the Humboldt National Forest. Unpublished thesis, University of Nevada, Reno.
440. JATKAR, S. A., S. R. RUSHFORTH, AND J. D. BROTHERSON. 1979. Diatom floristics and succession in a peat bog near Lily Lake, Summit County, Utah. *Great Basin Naturalist* 39: 15-43.
441. JAYNES, R. A., AND K. T. HARPER. 1978. Patterns of natural revegetation in arid southeastern Utah. *Journal of Range Management* 31: 407-411.
442. JENSEN, G. H. 1940. The relation of some physical and chemical factors of the soil to the productivity and distribution of certain waterfowl food plants at Bear River Migratory Waterfowl Refuge. Unpublished thesis, Utah State University, Logan.
443. JENSEN, M. E. 1989. Soil characteristics of mountainous northeastern Nevada sagebrush community types. *Great Basin Naturalist* 49: 469-481.
444. JENSEN, M. E., L. S. PECK, AND M. V. WILSON. 1988. A sagebrush community type classification for mountainous northeastern Nevada rangelands. *Great Basin Naturalist* 48: 422-433.
445. JENSEN, S. E., AND J. S. TUHY. 1981. Soils investigation of riparian communities of East Smiths Fork and Henrys Fork drainages, North Slope Uinta Mountains, Utah. Unpublished report presented to USDA Forest Service, Ogden, Utah. 35 pp.
446. JOHNSON, C. M. 1970. Common native trees of Utah. USDA Forest Service Special Report 22. Utah Agricultural Experiment Station, Logan, Utah. 109 pp.
447. JOHNSON, H. B. 1964. Changes in the vegetation of two restricted areas of the Wasatch Plateau as related to reduced grazing and complete protection. Unpublished thesis, Brigham Young University, Provo, Utah. 123 pp.
448. JOHNSON, J. L., AND R. D. PFISTER. 1982. A survey of potential ecological natural landmarks of the Middle Rocky Mountains. Unpublished report prepared for USDI, National Park Service by USDA, Forest Service Intermountain Forest and Range Experiment Station, Ogden, Utah. 197 pp.
449. JOHNSON, K. L. 1986. Sagebrush types as ecological indicators to integrated pest management (IPM) in the sagebrush ecosystem of western North America. Pages 1-10 in J. A. Onsager, ed., *Integrated pest management in rangeland: state of the art—in sagebrush ecosystem*, 27-28 March 1984, University of Nevada, Reno.
450. JOHNSON, K. L., ED. 1989. Rangeland resources of Utah. Utah Rangeland Committee report. Cooperative Extension Service, Utah State University, Logan. 103 pp.
451. JOHNSON, N. K. 1978. Patterns of Asian geography and specialism in the Intermountain Region. *Great Basin Naturalist Memoirs* 2: 137-160.
452. JOHNSON, R. V. 1929. A taxonomic-ecological survey of the Truckee Meadows. Unpublished thesis, University of Nevada, Reno.
453. KAISER COAL CORPORATION. 1985a. Vegetation. Volume 3, chapter 8, sections 8.0-8.3, pages VIII-1-VIII-21, plus appendices VIII-1, VIII-3, VIII-5 in *Mining and Reclamation Plan for Horse Canyon Mine, Kaiser Coal Corporation*. Utah Division of Oil, Gas and Mining Number ACT/007/013. Salt Lake City, Utah.
454. KAISER COAL CORPORATION. 1985b. Vegetation resources. Book 7, chapter 9, sections 9.1-9.3, pages 1-8, plus tables IX-1-IX-38, plus appendix IX-1 in *Mining and Reclamation Plan for Sunnyside Mine, Kaiser Coal Corporation*. Utah Division of Oil, Gas and Mining Number ACT/007/007. Salt Lake City, Utah.
455. KAY, P. A., AND C. G. OVIATT. 1978. *Pinus longaeva* in the Stansbury Mountains, Utah. *Great Basin Naturalist* 38: 49-50.
456. KEARNEY, T. H., L. J. BRIGGS, H. L. SHANTZ, J. W. MCLANE, AND R. L. PIEMEISEL. 1914. Indicator significance of vegetation in Tooele Valley, Utah. *Journal of Agricultural Research* 1: 365-417.

457. KENDEIGH, S. C. 1954. History and evolution of various concepts of plant and animal communities in North America. *Ecology* 35: 152-172.
458. KENNEDY, P. B. 1910. Plant distribution on the Truckee-Carson Project, Fallon, Nevada. *Muhlenbergia* 6.
459. KERR, C. W., AND J. A. HENDERSON. 1979a. Upland vegetation classification and map for a test area, Manti-La Sal National Forest. Appendix report 13 in J. A. Henderson and L. S. Davis, eds., ECOSYM: a classification and information system for wildlife resource management. Unpublished report prepared for Utah State University, Logan. 128 pp.
460. KERR, C. W., AND J. A. HENDERSON. 1979b. Upland potential vegetation classification and map for a test area, Manti-La Sal National Forest. Appendix report 15 in J. A. Henderson, L. S. Davis, and E. M. Ryberg, eds., ECOSYM: a classification and information system for wildlife resource management. Unpublished report prepared for Utah State University, Logan. 68 pp.
461. KING, S., AND A. MUIR. 1971. Utah big game range inventory, 1970. Utah Division of Wildlife Resources Publication Number 71-3. Salt Lake City, Utah. 208 pp.
462. KING, S., AND B. C. OLSON. 1972. Utah big game range inventory, 1971. Utah Division of Wildlife Resources Publication Number 72-10. Salt Lake City, Utah. 451 pp.
463. KIPPING, K. L. 1969. Ground photographic techniques for range condition and trend analysis. Unpublished thesis, University of Nevada, Reno.
464. KLEBENOW, D. A., R. BEALL, A. BRUNER, R. MASON, B. ROUNDY, W. STAGER, AND K. WARD. 1977. Summary progress report FY1977—controlled fire as a management tool in the pinyon-juniper woodland. University of Nevada Max Fleischmann College of Agriculture Miscellaneous Publication 29-UN3A/9: C76. Reno, Nevada. 155 pp.
465. KLEINER, E. F. 1966. A study of the vegetational communities of Red Butte Canyon, Salt Lake County, Utah. Unpublished thesis, University of Utah, Salt Lake City. 54 pp.
466. KLEINER, E. F. 1968. Comparative study of grasslands of Canyonlands National Park. Unpublished dissertation, University of Utah, Salt Lake City. 58 pp.
467. KLEINER, E. F. 1983. Successional trends in an ungrazed, arid grassland over a decade. *Journal of Range Management* 36: 114-118.
468. KLEINER, E. F., AND K. T. HARPER. 1966. An investigation of association patterns of prevalent grassland species in Red Butte Canyon, Salt Lake County, Utah. *Proceedings of Utah Academy of Science, Arts and Letters* 43: 29-36.
469. KLEINER, E. F., AND K. T. HARPER. 1972. Environment and community organization in grasslands of Canyonlands National Park. *Ecology* 53: 299-309.
470. KLEINER, E. F., AND K. T. HARPER. 1977a. Occurrence of four major perennial grasses in relation to edaphic factors in a pristine community. *Journal of Range Management* 30: 286-289.
471. KLEINER, E. F., AND K. T. HARPER. 1977b. Soil properties in relation to cryptogamic groundcover in Canyonlands National Park. *Journal of Range Management* 30: 202-205.
472. KLINE, L. G. 1973. Bromegrass productivity in relation to precipitation on shrubs canopy cover and soil nitrogen content. Unpublished thesis, Utah State University, Logan.
473. KONIAK, S. 1985. Succession in pinyon-juniper woodlands following wildfire in the Great Basin. *Great Basin Naturalist* 45: 556-566.
474. KONIAK, S. 1986. Successional processes in pinyon-juniper woodlands in the Great Basin. Unpublished thesis, University of Nevada, Reno.
475. KORSTIAN, C. F. 1921. Effect of late spring frost upon forest vegetation in the Wasatch Mountains of Utah. *Ecology* 2: 47-52.
476. KUNZLER, L. M., AND K. T. HARPER. 1980. Recovery of Gambel oak after fire in central Utah. *Great Basin Naturalist* 40: 127-130.
477. KUNZLER, L. M., K. T. HARPER, AND D. B. KUNZLER. 1981. Compositional similarity within the oak-brush type in central and northern Utah. *Great Basin Naturalist* 41: 147-153.
478. KURZIUS, M. 1981. Vegetation and flora of the Grapevine Mountains, Death Valley National Monument, California/Nevada. Unpublished thesis, University of Nevada, Las Vegas.
479. LAMBERT, C. B. 1940. The distribution of plant types of the Escalante Desert of Utah with relation to soil condition. Unpublished thesis, Brigham Young University, Provo, Utah.
480. LAMARCHE, V. C., AND H. A. MOONEY. 1972. Recent climatic change and development of the bristlecone pine (*P. longaeva* [Bailey]) krummholz zone, Mount Washington, Nevada. *Arctic and Alpine Research* 4: 61-72.
481. LANNER, R. M. 1971. Conifers of the Bear Lake area and mountains south of the Great Salt Lake. *Great Basin Naturalist* 31: 85-89.
482. LANNER, R. M. 1975. Pinyon pines and junipers of the southwestern woodlands. Pages 1-7 in G. F. Gifford and F. E. Busby, eds., Pinyon-Juniper Ecosystem: A Symposium. Utah State University, Logan.
483. LANNER, R. M., AND E. R. HUTCHISON. 1972. Relict stands of pinyon hybrids in northern Utah. *Great Basin Naturalist* 32: 171-175.
484. LANNER, R. M., AND S. B. VANDER WALL. 1980. Dispersal of limber pine seed by Clark's nutcracker. *Journal of Forestry* 78: 637-639.
485. LANNER, R. M., AND R. WARNICK. 1971. Conifers of the San Francisco Mountain, San Rafael Swell, and Roan Plateau. *Great Basin Naturalist* 31: 177-180.
486. LARRISON, E. J., AND D. R. JOHNSON. 1973. Density changes and habitat affinities of rodents of shade-scale and sagebrush associations. *Great Basin Naturalist* 33: 255-264.
487. LAVIN, M. 1981. The floristics of the headwaters of the Walker River, California and Nevada. Unpublished thesis, University of Nevada, Reno.
488. LAWTON, P. M. 1979. An investigation of the environmental relationships of selected forest habitat types in northern Utah. Unpublished thesis, Utah State University, Logan. 102 pp.
489. LAYCOCK, W. A. 1969. Enclosure and natural areas on rangelands in Utah. USDA Forest Service Research Paper INT-62. Intermountain Forest and Range Experiment Station, Ogden, Utah. 44 pp.

490. LAYCOCK, W. A., AND P. W. CONRAD. 1981. Responses of vegetation and cattle to various systems of grazing on seeded and native mountain rangelands in eastern Utah. *Journal of Range Management* 34: 52-58.
491. LEARY, K. D., AND P. M. PETERSON. 1984. Soil analyses in relation to vegetation in the Cottonwood Mountains, Death Valley National Monument. University of Nevada Cooperative National Park Resources Studies Unit Report 036/01. Las Vegas, Nevada.
492. LEARY, P. J. 1986. Plant succession after fire, Hunter Mountain, Death Valley National Monument. University of Nevada Cooperative National Park Resources Studies Unit Technical Report 034/03. Las Vegas, Nevada.
493. LEARY, P. J., AND W. E. NILES. 1976. Investigation of vegetational communities in Joshua Tree National Monument. University of Nevada Cooperative National Park Resources Studies Unit Technical Report 2. Las Vegas, Nevada.
494. LESPERANCE, A. L., J. A. YOUNG, R. E. ECKERT, JR., AND R. A. EVANS. 1978. Great Basin wildrye. *Rangeman's Journal* 5: 125-127.
495. LEWIS, M. E. 1970. Alpine rangelands of the Uinta Mountains, Ashley and Wasatch National Forests, Region 4 of the U. S. Forest Service. Unpublished report prepared for USDA Forest Service Region IV, Ogden, Utah. 75 pp.
496. LEWIS, M. E. 1971. Flora and major plant communities of the Ruby-East Humboldt Mountains with special emphasis on Lamoille Canyon. Unpublished report prepared for USDA Forest Service Region IV, Ogden, Utah. 62 pp.
497. LEWIS, M. E. 1973. Wheeler Peak area—species list inventoried and cataloged as of January 1973. Unpublished report prepared for USDA Forest Service Region IV, Ogden, Utah. 17 pp.
498. LEWIS, M. E. 1975a. Flora of the Santa Rosa Mountains. Unpublished report prepared for USDA Forest Service Region IV, Ogden, Utah. 19 pp.
499. LEWIS, M. E. 1975b. Plant communities of the Jarbridge Mountain Complex, Humboldt National Forest. Unpublished report prepared for USDA Forest Service Region IV, Ogden, Utah. 22 pp.
500. LINDSALE, M. A., J. T. HOWELL, AND J. M. LINDSALE. 1952. Plants of the Toiyabe Mountains area, Nevada. *Wasmann Journal of Biology* 10: 129-200.
501. LIVINGSTON, B. E., AND F. SHREVE. 1921. The distribution of vegetation in the United States, as related to climatic conditions. Carnegie Institution Publication 284. Washington, D.C. 590 pp.
502. LOEW, O. 1876. Report on the geographic distribution of vegetation in the Mohave Desert. Pages 442-444 in G. M. Wheeler, chief of engineers, Annual report, U.S. Geographical and Geological Survey west of the 100th Meridian, appendix 7.
503. LOOPE, L. L. 1969. Subalpine and alpine vegetation of northeastern Nevada. Unpublished thesis, Duke University, Durham, North Carolina.
504. LOOPE, W. L. 1977. Relationships of vegetation to environment in Canyonlands National Park, Utah. Unpublished dissertation, Utah State University, Logan.
505. LOOPE, W. L., AND N. E. WEST. 1979. Vegetation in relation to environments of Canyonlands National Park. Pages 195-199 in R. M. Linn, ed., *Proceedings, First Conference of Scientific Research in the National Parks*, Vol. 1, 9-13 November 1976, New Orleans, Louisiana. USDI, National Park Service Transactions and Proceeding Series Number 5.
506. LORAIN, G. E. 1970. 70 mm large scale aerial photography for range resources evaluation. Unpublished thesis, University of Nevada, Reno. 93 pp.
507. LOTAN, J. E. 1975. The role of cone serotiny in lodgepole pine forests. Pages 471-495 in *Proceedings, Symposium on Management of Lodgepole Pine*, Washington State University, Pullman.
508. LOUDERBOUGH, E. T., AND L. D. POTTER. 1982. Mancos shale: some physical and chemical properties which affect vegetative communities on shale outcrops. Pages 547-550 in *Proceedings, Symposium on Surface Mining Hydrology, Sedimentology and Reclamation*, University of Kentucky, Lexington.
509. LOVEJOY, T. E. 1979. The epoch of biotic impoverishment. *Great Basin Naturalist Memoirs* 3: 5-10.
510. LUDWIG, J. A. 1965. Relationships of grasslands to edaphic gradients of the foothill zone, Salt Lake County, Utah. Unpublished thesis, University of Utah, Salt Lake City.
511. LUDWIG, J. A. 1969. Environmental interpretation of foothill grassland communities of northern Utah. Unpublished dissertation, University of Utah, Salt Lake City. 100 pp.
512. MACDOUGAL, D. T. 1908. Sagebrush deserts of Nevada and Utah. Pages 28-30 in *Botanical features of North American deserts*. Carnegie Institute of Washington Publication 99.
513. MACMAHON, J. A., AND T. F. WIEBOLDT. 1978. Applying biogeographic principles to resource management: a case study evaluating Holdridge's Life Zone Model. *Great Basin Naturalist Memoirs* 2: 245-257.
514. MADANY, M. H. 1980. Petersboro Prairie. Unpublished report on field project prepared for Department of Range Science, Utah State University, Logan, Utah. 19 pp.
515. MADANY, M. H. 1981. Land use-fire regime interactions with vegetation structure of several montane forest areas of Zion National Park. Unpublished thesis, Utah State University, Logan. 103 pp.
516. MADANY, M. H. No date. Ponderosa pine forests of the Colorado Plateau. Unpublished report prepared for Dr. N. E. West, Department of Range Science, Utah State University, Logan.
517. MADANY, M. H., AND N. E. WEST. 1980a. Fire history of two montane forest areas of Zion National Park. Pages 50-56 in *Proceedings of the Fire History Workshop*. USDA Forest Service General Technical Report RM-81, Rocky Mountain Forest and Range Experiment Station, Fort Collins, Colorado.
518. MADANY, M. H., AND N. E. WEST. 1980b. Fire regime and land use interactions in ponderosa pine forests of Zion National Park, Utah. *Bulletin of the Ecological Society of America* 61: 122.
519. MADANY, M. H., AND N. E. WEST. 1982. Montane vegetation of several relict mesas in Zion National Park, Utah. *Abstracts of the Annual Meetings of the Society for Range Management* 35: 35.

520. MADANY, M. H., AND N. E. WEST. 1983. Livestock grazing-fire regime interactions within montane forests of Zion National Park, Utah. *Ecology* 64: 661-667.
521. MADANY, M. H., AND N. E. WEST. 1984. Vegetation of two relict mesas in Zion National Park. *Journal of Range Management* 27: 456-461.
522. MAJOR, J. 1948. Elements of a range condition classification of the aspen type in Utah. *Proceedings of the Utah Academy of Science, Arts and Letters* 25: 173-174.
523. MALANSON, G. P. 1980. Habitat and plant distributions in hanging gardens of the Narraones, Zion National Park, Utah. *Great Basin Naturalist* 40: 178-182.
524. MALANSON, G. P. 1982. The assembly of hanging gardens: effects of age, area, and location. *American Naturalist* 119: 145-150.
525. MARIAH ASSOCIATES. 1981. Vegetation baseline data analysis, Alton coal lease study area. Volume 6, chapter 3, appendix 3.6-A in *Mining and Reclamation Plan for Alton Mine*, Utah International Incorporated. Utah Division of Oil, Gas and Mining Number ACT/025/003. Salt Lake City, Utah.
526. MARIAH ASSOCIATES. 1989. Vegetation data report. Volume 4, chapter 9, section 9.1, pages 1-47 in *Mining and Reclamation Plan for Castle Gate Coal Mine*, Castle Gate Coal Company. Utah Division of Oil, Gas and Mining Number ACT/007/004.
527. MARKHAM, B. S. 1939. A preliminary study of the vegetation cover in Spanish Fork Canyon, Utah. Unpublished thesis, Brigham Young University, Provo, Utah. 79 pp.
528. MARR, J. W., AND D. BUCKNER. 1973. Ecological analyses of potential shale oil products pipeline corridors in Colorado and Utah. Unpublished report to Colony Development Operation, Atlantic Richfield Company, Denver, Colorado, by Thorne Ecological Institute and the University of Colorado, Boulder.
529. MARR, J. W., D. L. BUCKNER, AND C. MUTEL. 1974. Reaction of vegetation and soils to impact from construction and operation of pipelines in western Colorado and eastern Utah. Unpublished report prepared for Colony Development Operation, Atlantic Richfield Company, Denver, Colorado. 138 pp.
530. MARSTON, R. B. 1963. Some comparative hydrologic characteristics of aspen and mountain brush communities on steep mountain watersheds in northern Utah. Unpublished dissertation, Utah State University, Logan.
531. MARTIN, W. E. 1963. Close-in effects of an underground nuclear detonation on vegetation. I. Immediate effects of cratering, throw-out and blast (Project SEDAN). U.S. Atomic Energy Commission Report PNE-228F.
532. MASON, L. R. 1963. Using historical records to determine climax vegetation. *Journal of Soil and Water Conservation* 18: 190-194.
533. MASON, L. R. 1971. Yield and composition of Utah's range sites. USDA Soil Conservation Service, Portland, Oregon.
534. MASON, L. R., II, M. ANDREWS, J. A. CARLEY, AND E. D. HAACKE. 1967. Vegetation and soils of No Man's Mesa relict area. *Journal of Range Management* 20: 45-59.
535. MASON, L. R., AND V. MORTENSEN. 1977. Vegetation and soils of Zion National Park. Unpublished report prepared for USDA, Soil Conservation Service, Salt Lake City, Utah.
536. MASON, L. R., AND N. E. WEST. 1970. Timber Top Mesa: a relict area in Zion National Park. *Proceedings of Utah Academy of Science, Arts, and Letters* 47: 284-285.
537. MAUK, R. L., AND J. A. HENDERSON. 1984. Coniferous forest habitat types of northern Utah. USDA Forest Service General Technical Report INT-170. Intermountain Forest and Range Experiment Station, Ogden, Utah. 89 pp.
538. McDONALD, J. E. 1946. Measuring the forage crop of range lands by vegetation analysis. Unpublished thesis, Utah State Agricultural College, Logan.
539. MCGRAW, J. F. 1980. Landsat computer-aided analysis techniques for range vegetation mapping. Unpublished thesis, University of Nevada, Reno.
540. MCKELL, C. M. 1950. A study of plant succession in the oak brush (*Quercus gambelii*) zone after fire. Unpublished thesis, University of Utah, Salt Lake City. 79 pp.
541. McLAUGHLIN, S. P. 1986. Floristic analysis of the southwestern United States. *Great Basin Naturalist* 46: 46-65.
542. McMILLAN, C. 1948. A taxonomic and ecological study of the flora of the Deep Creek Mountains of central western Utah. Unpublished thesis, University of Utah, Salt Lake City. 99 pp.
543. McNULTY, I. B. 1947. The ecology of bitterbrush in Utah. Unpublished thesis, University of Utah, Salt Lake City.
544. MEEUWIG, R. O., AND S. COOPER. 1981. Site quality and growth of pinyon-juniper stands in Nevada. *Journal of Forestry Science* 27: 593-601.
545. MEEUWIG, R. O., R. B. MURRAY, P. T. TUELLER, AND S. V. COOPER. 1977. Stratifying the pinyon-juniper woodlands according to biotic potentials. Unpublished report prepared for Nevada Agricultural Experiment Station, Reno.
546. MEINERS, W. R. 1965. Some geologic and edaphic characteristics useful to management programming within pinyon-juniper type woodlands. Unpublished thesis, Utah State University, Logan.
547. MEINKE, R. J. 1975. A preliminary ecological and historical survey of north and south Caineville Mesas, Wayne County, Utah. Unpublished report prepared for USDI, Bureau of Land Management, Richfield, Utah. 127 pp.
548. MENZIES, C. W. 1935. Effects of overgrazing on the mortality of desert browse on the Utah West Desert. Unpublished thesis, Brigham Young University, Provo, Utah.
549. MERRIAM, C. H. 1893. Notes on the distribution of trees and shrubs in the deserts and desert ranges of southern California, southern Nevada, northwestern Arizona, and southwestern Utah. *North American Fauna* 7: 285-394.
550. MEYER, J. C., AND R. D. COMER. 1985. Reclamation investigations on disturbed lands at Glen Canyon National Recreation Area. Unpublished report prepared for USDI, National Park Service, by Thorne Ecological Institute, Boulder, Colorado. 10 pp.

551. MEYER, S. E. 1978. Some factors governing plant distributions in the Mojave-Intermountain transition zone. *Great Basin Naturalist Memoirs* 2: 197-207.
552. MILLER, R. F., F. A. BRANSON, I. S. MCQUEEN, AND C. T. SNYDER. 1982. Water relations in soils as related to plant communities in Ruby Valley, Nevada. *Journal of Range Management* 35: 462-468.
553. MILLER, W. M. 1888. The investigation of the interdependence of plant life and climatic conditions of Nevada. Nevada Agricultural Experiment Station Bulletin 2. Reno, Nevada.
554. MILTON, N. M., AND T. L. PURDY. 1983. Plant and soil relationships in two hydrothermally altered areas of the Great Basin. *Great Basin Naturalist* 43: 457-469.
555. MITCHELL, J. E. 1965. Relationship between soil mineralogy and plant distribution within two communities of the shadscale zone in Utah. Unpublished thesis, Utah State University, Logan.
556. MITCHELL, J. E., AND N. E. WEST. 1965. Effects of physical soil properties on the distribution of two shadscale zone species in northern Utah. *Bulletin of the Ecological Society of America* 46: 46 (abstract).
557. MITCHELL, J. E., N. E. WEST, AND R. W. MILLER. 1966. Soil physical properties in relation to plant community patterns in the shadscale zone of northwestern Utah. *Ecology* 47: 627-630.
558. MOONEY, H. H. 1973. Plant communities and vegetation of the White Mountains. Pages 7-17 in R. M. Lloyd, and R. S. Mitchell, A flora of the White Mountains, California and Nevada. University of California Press, Berkeley.
559. MOONEY, H. H., G. ST. ANDRE, AND R. D. WRIGHT. 1962. Alpine and subalpine vegetation of the White Mountains of California. *American Midland Naturalist* 68: 257-273.
560. MOONEY, M. J. 1985. A preliminary classification of high elevation sagebrush-grass plant vegetation in northern and central Nevada. Unpublished thesis, University of Nevada, Reno. 118 pp.
561. MOORE, R. R. 1964. A study of stand structure in the uneven-aged stands in the Engelmann spruce-subalpine fir types on the Utah State University forest. Unpublished dissertation, Utah State University, Logan.
562. MORDEN, C., J. D. BROTHERSON, AND B. N. SMITH. 1986. Ecological differences of C3 and C4 plant species from central Utah in habitats and mineral composition. *Great Basin Naturalist* 46: 140-147.
563. MORETTI, M. C. 1979. Vegetation and soil factors in relation to slope position: a study of plant communities on foothill knolls in the Uinta Basin of Utah. Unpublished thesis, Brigham Young University, Provo, Utah. 31 pp.
564. MORETTI, M. C., AND J. D. BROTHERSON. 1982. Vegetation and soil factors in relation to slope position of foothill knolls in the Uinta Basin of Utah. *Great Basin Naturalist* 42: 81-90.
565. MOZINGO, H. 1987. Shrubs of the Great Basin: a natural history. University of Nevada Press, Las Vegas. 342 pp.
566. MUEGGLER, W. F. 1976. Ecological role of fire in western woodland and range ecosystems. Pages 1-9 in *Proceedings: Use of Prescribed Burning in Western Woodlands and Range Ecosystems Symposium*, 18-19 March 1976. USDA Forest Service, Utah Agricultural Experiment Station, Logan, Utah.
567. MUEGGLER, W. F. 1985. Vegetation associations. Pages 45-55 in Debyle and Winokur, eds., *Aspen: ecology and management in the western United States*. USDA Forest Service General Technical Report RM-119. Rocky Mountain Forest and Range Experiment Station, Fort Collins, Colorado.
568. MUEGGLER, W. F. 1988. Aspen community types of the Intermountain Region. USDA Forest Service General Technical Report INT-250. Intermountain Research Station, Ogden, Utah. 135 pp.
569. MUEGGLER, W. F., AND D. C. BARTOS. 1977. Grindstone Flat and Big Flat exclosures: a 41 year record of changes in clearcut aspen communities. USDA Forest Service Research Paper INT-195. Rocky Mountain Forest and Range Experiment Station, Ogden, Utah.
570. MUEGGLER, W. F., AND R. B. CAMPBELL, JR. 1986. Aspen community types of Utah. USDA Forest Service Research Paper INT-362. Intermountain Forest and Range Experiment Station, Ogden, Utah.
571. MURDOCK, J. R. 1951. Alpine plant succession near Mount Emmons, Uinta Mountains, Utah. Unpublished thesis, Brigham Young University, Provo, Utah.
572. MURDOCK, J. R., S. L. WELSH, AND B. W. WOOD, EDS. 1975. Navajo-Kaiparowits environmental baseline studies 1971-1974. Unpublished report prepared for Brigham Young University, Center for Health and Environmental Studies, Provo, Utah. 864 pp.
573. NABI, A. A. 1978. Variation in successional status of pinyon-juniper woodlands in the Great Basin. Unpublished thesis, Utah State University, Logan.
574. NACHLINGER, J. L. 1985. The ecology of subalpine meadows in the Lake Tahoe region, California and Nevada. Unpublished thesis, University of Nevada, Reno.
575. NATIVE PLANTS INCORPORATED. 1983. J. B. King Mine, soil and vegetation data. Volume 1, section 783.19 in *Mining and Reclamation Plan for J. B. King Mine*, Western States Minerals Corporation. Utah Division of Oil, Gas and Mining Number ACT/015/002. Salt Lake City, Utah.
576. NEELY, E. E., AND M. E. BARKWORTH. 1984. Vegetation on soils derived from dolomite and quartzite in the Bear River Range, Utah: a comparative study. *Bulletin of the Torrey Botanical Club* 3: 179-192.
577. NEESE, E. 1980. Vegetation of the Henry Mountains. Pages 219-236 in *Proceedings UGA-1980 Henry Mountains Symposium*.
578. NEILSON, R. P. 1986. On the interface between current ecological studies and the paleobotany of pinyon-juniper woodlands. Unpublished paper presented to Pinyon-Juniper Conference, 13-16 January 1986, USDA Forest Service, Reno, Nevada.
579. NEILSON, R. P., AND L. H. WULLSTEIN. 1985. Comparative drought physiology and biogeography of *Quercus gambelii* and *Quercus turbinella*. *American Midland Naturalist* 114: 259-271.

580. NELSON, R. P., AND L. H. WULLSTEIN. 1986. Microhabitat affinities of Gambel oak seedlings. *Great Basin Naturalist* 46: 294-298.
581. NELSON, J. V. 1973. The environment of the vegetation of the Upper Sonoran and transition zones in the Uinta Basin. Unpublished thesis, University of Utah, Salt Lake City. 106 pp.
582. NELSON, D. L., AND C. F. TIERNAN. 1983. Winter injury of sagebrush and other woodland shrubs in the western United States. USDA Forest Service Research Paper INT-314. Intermountain Forest and Range Experiment Station, Ogden, Utah. 17 pp.
583. NELSON, L. P., AND M. E. JENSEN. 1987. Sagebrush-grass community types of the Humboldt National Forest. Unpublished report prepared for USDA Forest Service, Humboldt National Forest, Elko, Nevada. 80 pp.
584. NELSON, M. G. 1976. The montane coniferous forests of the northern Deep Creek Range, Utah. Unpublished thesis, University of Utah, Salt Lake City. 73 pp.
585. NELSON, N. F. 1954. Factors in the development and restoration of waterfowl habitat at Ogden Bay Refuge, Weber County, Utah. Utah State Fish and Game Department Publication 6. Salt Lake City, Utah. 87 pp.
586. NELSON, N. F. 1955. Ecology of Great Salt Lake marshes. *Proceedings of Utah Academy of Science, Arts, and Letters* 32: 37-40.
587. NELSON, R. 1976. Plants of Zion National Park. Unpublished report prepared for the Zion Natural History Association, Springdale, Utah.
588. NETTLETON, W. D., B. R. BRASHER, E. L. SPENCER, L. N. LANGAN, AND F. F. PETERSON. 1986. Differentiation of closely related Xerolls that support different sagebrush plant communities in Nevada. *Soil Science Society of America Journal* 50: 1277-1280.
589. NEWBERRY, J. S. 1861. Sage Plain. In: J. C. Ives, ed., Report of topographical engineers upon explorations of the Colorado River of the West. House Executive Document 90, Part 3, 36th Congress, 1st Session. Serial Set Volume 1058 with maps. Washington, D.C.
590. NICKENS, P. R. 1977. Wood Rat Knoll: a multicomponent site in Butler Wash, southeastern Utah. Unpublished report prepared for USDI, Bureau of Land Management, by the Department of Anthropology, Denver University, Denver, Colorado.
591. NIXON, E. S. 1961. An ecological study of an enclosure on mountain brush vegetation of the Wasatch Mountains, Utah. Unpublished thesis, Brigham Young University, Provo. 245 pp.
592. NIXON, E. S. 1967. A comparative study of the mountain brush vegetation in Utah. *Great Basin Naturalist* 27: 59-66.
593. NIXON, E. S. 1977. A mountain *Cercocarpus* population revisited. *Great Basin Naturalist* 37: 97-99.
594. NIXON, E. S., AND E. M. CHRISTENSEN. 1959. An ecological study of an enclosure in the mountain brush vegetation of the Wasatch Mountains, Utah. *Proceedings of Utah Academy of Science, Arts, and Letters* 36: 182-183 (abstract).
595. NORTH AMERICAN EQUITIES N.V. 1984. Vegetation information. Volume I, section 783.19, plus exhibit 6, pages 1-22 in Mining and Reclamation Plan for Blazon Mine No. 1, North American Equities N.V. Utah Division of Oil, Gas and Mining Number ACT/007/021. Salt Lake City, Utah.
596. NORTHGUTT, B. E. 1978. The plant ecology of Butler Wash, southeastern Utah. Unpublished thesis, University of Colorado, Boulder. 118 pp.
597. NORTON, B. E. 1978. The impact of sheep grazing on long-term successional trends in salt desert shrub vegetation of southwest Utah. Pages 610-613 in *Proceedings of the First International Rangeland Congress*, Society for Range Management, Denver, Colorado.
598. NYGREN, L. R. 1963. Summer habits and habitats of chukar partridge in northern Utah. Unpublished thesis, Utah State University, Logan. 53 pp.
599. O'FARRELL, M. J. 1973. Seasonal activity patterns, population dynamics and spatial relationships of rodents in a sagebrush community. Unpublished dissertation, University of Nevada, Reno.
600. O'FARRELL, T. P., AND L. A. EMERY. 1976. Ecology of the Nevada Test Site: a narrative summary and annotated bibliography. University of Nevada Applied Ecology and Physiology Center Desert Research Institute Report NVO-167. Boulder City, Nevada.
601. OLSEN, P. F. 1974. Wildlife resources of the Utah oil shale area. Utah Division of Wildlife Research Publication 74-2. Salt Lake City, Utah. 147 pp.
602. OLSON, B. C. 1975. Utah big game range inventory, 1974. Utah Division of Wildlife Resources Publication Number 75-14. Salt Lake City, Utah. 230 pp.
603. OLSON, B. C. 1976. Utah big game range inventory, 1975. Utah Division of Wildlife Resources Publication Number 76-10. Salt Lake City, Utah. 128 pp.
604. OLSON, B. C. 1977. Utah big game range inventory, 1976. Utah Division of Wildlife Resources Publication Number 77-3. Salt Lake City, Utah. 210 pp.
605. OLSON, B. C., AND J. R. LOGAN. 1973. Utah big game range inventory, 1972. Utah Division of Wildlife Resources Publication Number 73-1. Salt Lake City, Utah. 288 pp.
606. OLSON, B. C., AND J. R. LOGAN. 1974. Utah big game range inventory, 1973. Utah Division of Wildlife Resources Publication Number 74-16. Salt Lake City, Utah. 369 pp.
607. OOSTING, H. J. 1956. The study of plant communities. 2d edition. W. H. Freeman and Company, San Francisco. 440 pp.
608. OOSTING, H. J., AND W. D. BILLINGS. 1943. The red fir forest of the Sierra Nevada: *Abietum magnificae*. *Ecological Monographs* 13: 259-274.
609. ORR, H. K. 1957. Effects of plowing and seeding on some forage production and hydrologic characteristics of a subalpine range in central Utah. USDA Forest Service Research Paper 47. Intermountain Forest and Range Experiment Station, Ogden, Utah. 23 pp.
610. OSTLER, W. K., AND K. T. HARPER. 1978. Floral ecology in relation to plant species diversity in the Wasatch Mountains of Utah and Idaho. *Ecology* 59: 848-861.

611. OSTLER, W. K., K. T. HARPER, AND K. B. MCKNIGHT. 1981. The effects of late lying snow on a subalpine *Danthonia-Deschampsia-Carex* meadow. Pages 136-178 in K. T. Harper, W. K. Ostler, K. B. McKnight, and D. L. Hunter, eds., Potential ecological impact of snow pack augmentation in the Uinta Mountains of Utah. Unpublished report prepared for USD1, Bureau of Reclamation, Denver, Colorado.
612. OSTLER, W. K., K. T. HARPER, K. B. MCKNIGHT, AND D. C. ANDERSON. 1982. The effects of increasing snowpack on a subalpine meadow in the Uinta Mountains, Utah. *Journal of Arctic and Alpine Research* 14: 203-214.
613. PADGETT, W. G., AND M. E. MANNING. 1988. Preliminary riparian community type classification for Nevada Draft. Unpublished report prepared for USDA Forest Service Region IV, Intermountain Region Ecology and Classification Program, Ogden, Utah.
614. PADGETT, W. G., A. P. YOUNGBLOOD, AND A. H. WINWARD. 1988. Riparian community type classification of Utah. USDA Forest Service Intermountain Region Publication R4-ECOL-88-01. Ogden, Utah. 304 pp.
615. PAMMEL, L. H. 1903. Some ecological notes on the vegetation of the Uinta Mountains. *Proceedings of Iowa Academy of Sciences* 10: 57-70.
616. PAMMEL, L. H. 1913. The grasses of the Uinta Mountains and adjacent regions. *Proceedings of Iowa Academy of Science* 20: 133-149.
617. PANIK, H. R. 1976. The vertebrate structure of a pinyon-juniper woodland community in northwestern Nevada. Unpublished thesis, University of Nevada, Reno.
618. PARRY, C. C. 1875. Botanical observations in southern Utah, in 1874. *American Naturalist* 9: 139-146.
619. PASSEY, H. B., AND V. K. HUGIE. 1962. Sagebrush on relict ranges in the Snake River Plains and northern Great Basin. *Journal of Range Management* 15: 273-278.
620. PASSEY, H. B., AND V. K. HUGIE. 1963. Variation in bluebunch wheatgrass in relation to environments and geographic location. *Ecology* 44: 158-161.
621. PASSEY, H. B., V. K. HUGIE, E. W. WILLIAMS, AND D. E. BALL. 1982. Relationships between soil, plant community, and climate on rangelands of the Intermountain West. USDA Soil Conservation Service Technical Bulletin 1669. Salt Lake City, Utah. 123 pp.
622. PAVLIK, B. M. 1985. Sand dune flora of the Great Basin and Mojave Deserts of California, Nevada, and Oregon. *Madroño* 32: 197-213.
623. PEDERSON, J. C., AND K. T. HARPER. 1979. Chemical composition of some important plants of southeastern Utah summer ranges related to mule deer reproduction. *Great Basin Naturalist* 39: 122-128.
624. PENDLETON, B. K. 1981. Aspects of the floral biology of a subalpine meadow of the Uinta Mountains, Utah. Unpublished thesis, Brigham Young University, Provo, Utah. 54 pp.
625. PERSKE, G. K. 1960. The altitudinal zonation of plants and animals on the eastern slope of the Carson Range. Unpublished thesis, University of Nevada, Reno. 127 pp.
626. PETERSON, D. L. 1954. Reinventory of surface soil and plant characteristics, Morris Watershed. Unpublished thesis, University of Utah, Salt Lake City. 48 pp.
627. PETERSON, P. M. 1984. Flora and physiognomy of the Cottonwood Mountains, Death Valley National Monument, California. University of Nevada Cooperative National Park Resources Studies Unit Report 022/06. Las Vegas, Nevada.
628. PETERSON, S. J., AND W. R. KEAMMERER. 1980. Vegetation resources for the Emery, Utah deep mine project. Volume 6, chapter 9, sections 9.1-9.4, Pages 9-1-9-24, plus appendices 9-1, 9-2 in Mining and Reclamation Plan for Emery Deep Mine, Consolidation Coal Company. Utah Division of Oil, Gas and Mining Number ACT/015/015. Salt Lake City, Utah.
629. PETERSON, S. R. 1969. Waterfowl ecology and utilization of Uinta mountain water areas. Unpublished thesis, Utah State University, Logan. 58 pp.
630. PFISTER, R. D. 1972. Vegetation and soils in the subalpine forests of Utah. Unpublished dissertation, Washington State University, Pullman. 98 pp.
631. PHILLIPS, B. G., A. M. PHILLIPS III, AND M. A. SCHMIDT BERNZOTT. 1987. Annotated checklist of vascular plants of Grand Canyon National Park. Grand Canyon Natural History Association Monograph 7. Flagstaff, Arizona.
632. PHILLIPS, T. A. 1979. North Cedars pinyon-juniper studies. USDA Forest Service Range Improvement Notes (November 1979). Intermountain Region, Ogden, Utah. 12 pp.
633. PICKFORD, G. D. 1932. The influence of continued heavy grazing and of promiscuous burning on spring-fall ranges in Utah. *Ecology* 13: 159-171.
634. PISTER, E. P. 1979. Endangered species: costs and benefits. *Great Basin Naturalist Memoirs* 3: 151-158.
635. PLAIR, T. B. 1934. Vegetative cover of the Utah Parks. *Zion-Bryce Nature Notes* 6(3): 33-35.
636. PLATEAU MINING COMPANY. 1957. Vegetation information. Volume 1, section 783.19, pages 783-68-783-91d, plus tables 17-46 in Mining and Reclamation Plan for Star Point Mine, Plateau Mining Company. Utah Division of Oil, Gas and Mining Number ACT/007/006. Salt Lake City, Utah.
637. PLATOU, K. A. 1985. Plant successional patterns on seral sagebrush/grass ranges in northern Nevada. Unpublished thesis, University of Nevada, Reno.
638. PLUMMER, A. P. 1958. Restoration of juniper-pinyon ranges in Utah. Pages 207-211 in *Proceedings, Society of American Foresters Annual Meeting, 1958*, Salt Lake City, Utah. Society of American Foresters, Bethesda, Maryland.
639. PLUMMER, A. P., D. R. CHRISTENSEN, AND S. B. MONSEN. 1968. Restoring big game range in Utah. Utah Division of Fish and Game Publication 68-3. Salt Lake City, Utah. 183 pp.
640. PLUMMER, A. P., D. R. CHRISTENSEN, R. STEVENS, AND K. R. JORGENSEN. 1970. Highlights, results, and accomplishments of game range restoration studies. Utah State Division of Fish and Game Publication 70-3. Salt Lake City, Utah. 94 pp.

641. POTTER, L. D., AND N. B. PATTISON. 1976. Shoreline ecology of Lake Powell. Institute of Geophysics and Planetary Physics. Lake Powell Restoration Project Bulletin 26. 235 pp.
642. POTTER, L. D., R. C. REYNOLDS, JR., AND E. T. LOUDERROUGH. 1985a. Mancos shale and plant community relationships: analysis of shale, soil, and vegetation transects. *Journal of Arid Environments* 9: 147-165.
643. POTTER, L. D., R. C. REYNOLDS, JR., AND E. T. LOUDERROUGH. 1985b. Mancos shale and plant community relationships: field observations. *Journal of Arid Environments* 9: 137-145.
644. POWELL, J. W. 1879. Report on the lands of the arid region of the United States with a more detailed account of the lands of Utah. 2d ed. U.S. Government Printing Office, Washington, D.C. 195 pp.
645. PRATT, O. 1975. Orson Pratt's Journal, 1849-1850. E. J. Watson Publishing Company, Salt Lake City, Utah.
646. PRATT, P. P. 1888. Life and travels of Parley P. Pratt. Russel Brothers, Chicago, Illinois.
647. PREECE, S. J., JR. 1950. Floristic and ecological features of the Raft River Mountains of northwestern Utah. Unpublished thesis, University of Utah, Salt Lake City.
648. PRESLEY, A. R. 1978. Synoptic patterns and precipitation in the pinyon-juniper zone of the Great Basin. Unpublished thesis, University of Nevada, Reno. 149 pp.
649. PRICE, K. P., AND J. D. BROTHERTON. 1987. Habitat and community relationships of cliffrose (*Cowania mexicana* var. *stansburiana*) in central Utah. *Great Basin Naturalist* 47: 132-151.
650. PRIGGE, B. A. 1975. Flora of the Clark Mountain Range, San Bernardino County, California. Unpublished thesis, California State University, Los Angeles. 105 pp.
651. PROCTOR, D. V. 1971. A phytosociological study of the north slopes of the Uinta Mountains. Unpublished report prepared for the USDA Forest Service, Wasatch National Forest, Salt Lake City, Utah. 506 pp.
652. PUDNEY, R. A. 1972. Food preferences of mule deer on the Ruby-Butte study area. Unpublished thesis, University of Nevada, Reno.
653. RALSTON, G. L. 1969. Plant zonation on dune sands of Washoe Lake, Washoe County, Nevada. Unpublished thesis, University of Nevada, Reno.
654. RANGELAND RESOURCES INTERNATIONAL, INC. 1979. Final report for field search for rare plants in the Reno, Nevada, ES area. Unpublished report prepared for Bureau of Land Management, Reno, Nevada. 78 pp.
655. RASMUSSEN, D. I. 1933. Animal ecology of the Kaibab National Forest. Unpublished thesis, University of Illinois, Urbana.
656. RASMUSSEN, L. L., AND J. D. BROTHERTON. 1984. Habitat relationships of sandsage (*Artemisia filifolia*) in southern Utah. Pages 58-66 in *Proceedings—Symposium on the Biology of Artemisia and Chrysothamnus*. USDA Forest Service INT-200. Intermountain Range and Experiment Station, Ogden, Utah.
657. RASMUSSEN, L. L., AND J. D. BROTHERTON. 1986. Response of winterfat (*Ceratoides lanata*) communities to release from grazing pressure. *Great Basin Naturalist* 46: 148-156.
658. RATLIFF, J. M. 1972. Remote sensing evaluations of phreatophytic vegetation in Nevada. Unpublished thesis, University of Nevada, Reno.
659. RAWLEY, E. V. 1976. Small islands of the Great Salt Lake. Utah Department of Natural Resources Publication 6-19. Salt Lake City, Utah. 109 pp.
660. REAM, R. D. 1960. An ordination of the oak communities of the Wasatch Mountains. Unpublished thesis, University of Utah, Salt Lake City. 52 pp.
661. REAM, R. D. 1964. The vegetation of the Wasatch Mountains, Utah and Idaho. Unpublished dissertation, University of Wisconsin, Madison. 190 pp.
662. REESE, G. A. 1981. Diversity and production of herbaceous vegetation in northern Utah subalpine chronosequence. Unpublished thesis, Utah State University, Logan.
663. REINER, R. L. 1981. Effects of grazing horses on a northern Utah big game winter range. Unpublished thesis, Utah State University, Logan.
664. REMY, J., AND J. BRECHLEY. 1861. A journey to Great Salt Lake City with a sketch of history, religion, and customs of the Mormons and an introduction to the religious movement in the United States, Vol. I, 508 pp., Vol. II, 605 pp. W. Jeffs Publishing, London.
665. REVEAL, J. L. 1944. Single-leaf pinyon and Utah juniper woodlands of western Nevada. *Journal of Forestry* 42: 276-278.
666. REVEAL, J. L. 1979a. Biogeography of the Intermountain Region: a speculative appraisal. *Mentzelia* 4: 1-92.
667. REVEAL, J. L. 1979b. Biogeography of the Intermountain Region. *Journal of the Northern Nevada Native Plant Society* 4: 1-49.
668. REYNOLDS, R. V. R. 1911. Grazing and floods: a study of conditions in the Manti National Forest, Utah. USDA Forest Service Bulletin 91. U.S. Government Printing Office, Washington, D.C. 16 pp.
669. RICE, B., AND M. WESTOBY. 1978. Vegetative responses of some Great Basin shrub communities protected against jack rabbits or domestic stock. *Journal of Range Management* 31: 28-34.
670. RICHAN, F. P. 1957. The geography of Pavant Valley, Utah. Unpublished thesis, University of Utah, Salt Lake City.
671. RICHMOND, G. M. 1962. Quaternary stratigraphy of the La Sal Mountains, Utah. USDI Geological Survey Professional Paper 324. U.S. Government Printing Office, Washington, D.C. 135 pp.
672. RICKARD, W. H. 1959. Gross vegetation pattern within the Nevada test site. *Journal of the Colorado-Wyoming Academy of Science* 4: 32.
673. RICKARD, W. H. 1963. Vegetational analyses in a creosote bush community and the radioecologic implications. Pages 39-44 in V. Schultz, and A. W. Kelment, eds., *Radioecology*. Reinhold Publishing Corp., New York, and A.I.B.S., Washington, D.C.
674. RICKARD, W. H., AND J. C. BEATLEY. 1965. Canopy coverage of the desert shrub vegetation mosaic of the Nevada Test Site. *Ecology* 46: 524-529.
675. RICKARD, W. H., AND J. R. MURDOCK. 1963. Soil moisture and temperature survey of a desert vegetation mosaic. *Ecology* 44: 821-824.

676. RICKARD, W. H., AND L. M. SHIELDS. 1963. An early stage in the plant recolonization of a nuclear target area. *Radiation Botany* 3: 41-44.
677. RIDD, K. 1978. Vegetation of the Uinta Mountains above 7,000 feet. Unpublished map prepared for Department of Geography, University of Utah, Salt Lake City.
678. RIPARIAN AREA MANAGEMENT FIELD TASK FORCE. 1986. Riverine riparian inventory and monitoring technical reference. Unpublished report prepared for USDI Bureau of Land Management, Carson City, Nevada.
679. ROBERTS, R. C. 1950. Chemical effects of salt-tolerant shrubs on soils. Fourth International Congress of Soil Science 1: 404-406.
680. ROBERTSON, J. H. 1947. Response of range grasses to different intensities of competition with sagebrush (*Artemisia tridentata* Nutt.). *Ecology* 28: 1-16.
681. ROBERTSON, J. H. 1965. Range types and grazing history of Nevada. Pages 1-2 in *Proceedings of the 18th annual meeting, American Society of Range Management*, 9-12 February 1965, Las Vegas, Nevada.
682. ROBERTSON, J. H. 1971. Changes on a sagebrush-grass range in Nevada ungrazed for 30 years. *Journal of Range Management* 24: 397-400.
683. ROBERTSON, J. H., AND P. B. KENNEDY. 1954. Half-century changes on northern Nevada ranges. *Journal of Range Management* 7: 117-121.
684. ROBERTSON, R. L. 1976. Ruffed grouse habitat preferences and effects of livestock grazing on habitat utilization. Unpublished thesis, Utah State University, Logan. 62 pp.
685. ROBINETTE, W. L., AND C. ALDOUS. 1964. Zion National Park vegetation studies. Unpublished report prepared for USDI Fish and Wildlife Service, Springdale, Utah.
686. ROBOCKER, W. C. 1957. Some characteristics of soils and associated vegetation infested with *Halogeton*. Unpublished paper presented at the 10th annual meeting, American Society of Range Management, Great Falls, Montana, 29 January-1 February 1957. 6 pp.
687. ROBOCKER, W. C. 1958. Some characteristics of soils and associated vegetation infested with *Halogeton*. *Journal of Range Management* 11: 212-220.
688. ROBOCKER, W. C. 1961. The influence of perennial vegetation and precipitation on occurrence of *Halogeton glomeratus* and *Bromus tectorum* in arid and semi-arid regions. *Journal of Range Management* 14: 28-34.
689. ROGERS, B. S., AND A. THEIM. 1979. Vascular plants of the Sheldon National Wildlife Refuge with special reference to possible threatened and endangered species. Unpublished report prepared for USDI Fish and Wildlife Service, Portland, Oregon.
690. ROGERS, G. F. 1982. Then and now: a photographic history of vegetation change in the central Great Basin desert. University of Utah Press, Salt Lake City. 152 pp.
691. ROMNEY, E. M., V. Q. HALE, A. WALLACE, O. R. LUNT, J. D. CHILDRRESS, H. KAAZ, G. V. ALEXANDER, J. E. KINNEAR, AND T. L. ACKERMAN. 1973. Some characteristics of soil and perennial vegetation in northern Mojave Desert areas of the Nevada Test Site. U.S. Atomic Energy Commission Report 12-916. Washington, D.C.
692. ROMNEY, E. M., AND A. WALLACE. 1980. Ecotonal distribution of salt-tolerant shrubs in the northern Mojave Desert. *Great Basin Naturalist Memoirs* 4: 132-138.
693. ROMNEY, E. M., A. WALLACE, AND R. B. HUNTER. 1980. The pulse hypothesis in the establishment of *Artemisia* seedlings at Pahute Mesa, Nevada. *Great Basin Naturalist Memoirs* 4: 22-26.
694. ROMNEY, E. M., A. WALLACE, H. KAAZ, AND V. Q. HALE. 1980. The role of shrubs on redistribution of mineral nutrients in soil in the Mojave Desert. *Great Basin Naturalist Memoirs* 4: 122-132.
695. ROUNDY, B. A., AND J. A. YOUNG. 1955. Salt deserts of the Great Basin. Pages 39-49 in *Proceedings—selected papers presented at the 38th annual meeting of the Society for Range Management*, 11-15 February 1955, Salt Lake City, Utah.
696. RUSHFORTH, S. R., L. L. ST. CLAIR, J. D. BROTHESON, AND G. NEBEKER. 1982. Ecology of lichen communities in Zion National Park. *Bryologist* 85: 185-192.
697. RYDBERG, P. A. 1911. Report of a trip to southeastern Utah in the summer of 1911. *Journal of the New York Botanical Garden* 12(143): 237-253.
698. RYDBERG, P. A. 1913. Phytogeographical notes on the Rocky Mountain region I. Alpine region. *Bulletin of the Torrey Botanical Club* 40: 677-686.
699. RYDBERG, P. A. 1914a. Phytogeographical notes on the Rocky Mountain region III. Formations in the alpine zone. *Bulletin of the Torrey Botanical Society* 41: 459-474.
700. RYDBERG, P. A. 1914b. Phytogeographical notes on the Rocky Mountain region II. Origin of the alpine flora. *Bulletin of the Torrey Botanical Society* 41: 89-103.
701. RYDBERG, P. A. 1915a. Phytogeographical notes on the Rocky Mountain region V. Grasslands of the subalpine and montane zones. *Bulletin of the Torrey Botanical Club* 42: 629-643.
702. RYDBERG, P. A. 1915b. Phytogeographical notes on the Rocky Mountain region IV. Forests of the subalpine and montane zones. *Bulletin of the Torrey Botanical Club* 42: 11-25.
703. RYDBERG, P. A. 1916a. Phytogeographical notes on the Rocky Mountain region VI. Distribution of the subalpine plants. *Bulletin of the Torrey Botanical Club* 43: 343-364.
704. RYDBERG, P. A. 1916b. Vegetative life zones of the Rocky Mountain region. *Memoirs of the New York Botanical Garden* 6: 477-499.
705. RYDBERG, P. A. 1917. Phytogeographical notes on the Rocky Mountain region VII. Formations in the subalpine zone. *Bulletin of the Torrey Botanical Club* 44: 431-455.
706. RYDBERG, P. A. 1919. Phytogeographical notes on the Rocky Mountain region VIII. Distribution of the montane plants. *Bulletin of the Torrey Botanical Club* 46: 295-327.
707. RYDBERG, P. A. 1920. Phytogeographical notes on the Rocky Mountain region IX. Wooded formations of the montane zone of the southern Rockies. *Bulletin of the Torrey Botanical Club* 47: 441-454.
708. RYDBERG, P. A. 1921. Phytogeographical notes on the Rocky Mountain region X. Grasslands and

- other open formations of the montane zone of the southern Rockies. *Bulletin of the Torrey Botanical Club* 48: 315-326.
709. SALISBURY, F. B. 1952. Plant-soil relations on material derived from hydrothermally altered rock in the Marysvale region of Utah. Unpublished thesis, University of Utah, Salt Lake City.
710. SALISBURY, F. B. 1964. Soil formation and vegetation on hydrothermally altered rock material in Utah. *Ecology* 45: 1-9.
711. SAMPSON, A. W. 1925. The foothill-montane-alpine flora and its environment. Pages 24-31 in I. Tidestrom, ed., *Flora of Utah and Nevada*. U.S. National Herbarium Contributions 25. Washington, D.C. 665 pp.
712. SARGENT, C. S. 1879. The forests of central Nevada. *American Journal of Science and Arts* 17: 417-426.
713. SAVAGE, D. E. 1968. The relationship of sage grouse to upland meadows in Nevada. Unpublished thesis, University of Nevada, Reno.
714. SCHIER, G. A. 1975. Deterioration of aspen clones in the middle Rocky Mountains. USDA Forest Service Research Paper INT-710. Intermountain Forest and Range Experiment Station, Ogden, Utah. 14 pp.
715. SCHIMPF, D. J., J. A. HENDERSON, AND J. A. MACMAHON. 1980. Some aspects of succession in the spruce-fir forests of northern Utah. *Great Basin Naturalist* 40: 1-26.
716. SCHRAMM, D. R. 1982. Floristics and vegetation of the Black Mountains, Death Valley National Monument. Unpublished report prepared for University of Nevada, Las Vegas.
717. SCHULTZ, B. 1987. Ecology of curlleaf mountain mahogany (*Cercocarpus ledifolius*) in western and central Nevada: population structure and dynamics. Unpublished thesis, University of Nevada, Reno.
718. SCHULTZ, L. M., E. E. NEELY, AND J. S. TUHY 1987. Flora of the Orange Cliffs of Utah. *Great Basin Naturalist* 47: 287-298.
719. SCIENCE APPLICATIONS INCORPORATED. 1980. Vegetation survey at the Knight Mine, Sevier County, Utah. Volume 1, section 783.19, appendix 783-II in *Mining and Reclamation Plan for Knight Mine*, Utah International Incorporated. Utah Division of Oil, Gas and Mining Number ACT/041/005. Salt Lake City, Utah.
720. SHANTZ, H. L. 1916. Plant succession in Tooele Valley, Utah. Pages 233-236 in F. E. Clements, *Carnegie Institute Publication* 242. Washington, D.C.
721. SHANTZ, H. L. 1925. Plant communities in Utah and Nevada. Pages 15-23 in I. Tidestrom, *Flora of Utah and Nevada*. Contributions of the U.S. National Herbarium 25. Washington, D.C. 665 pp.
722. SHANTZ, H. L., AND R. L. PIEMEISEL. 1940. Types of vegetation in Escalante Valley, Utah, as indicators of soil conditions. USDA Technical Bulletin 713. Washington, D.C. 46 pp.
723. SHEETER, G. R. 1968. Secondary succession and range improvements after wildfire in northeastern Nevada. Unpublished thesis, University of Nevada, Reno.
724. SHIELDS, L. M., AND P. V. WELLS. 1962. Effects of nuclear testing on desert vegetation. *Science* 135: 38-40.
725. SHIELDS, L. M. AND P. V. WELLS. 1963. Recovery of vegetation atomic target areas at the Nevada Test Site. Pages 307-310 in *Radioecology*, Proceedings of the First National Symposium on Radioecology. Reinhold Publishing Corporation, New York.
726. SHIELDS, L. M., P. V. WELLS, AND W. H. RICKARD. 1963. Vegetational recovery on atomic target areas in Nevada. *Ecology* 44: 697-705.
727. SHREVE, F. 1942. The desert vegetation of North America. *Botanical Review* 8: 195-246.
728. SHUPE, J. B., AND J. D. BROTHERSON. 1985. Differential effects of cattle and sheep grazing on high mountain meadows in the Strawberry Valley of central Utah. *Great Basin Naturalist* 45: 142-149.
729. SHUPE, J. B., J. D. BROTHERSON, AND S. R. RUSHFORTH. 1986. Patterns of vegetation surrounding springs in Goshen Bay, Utah County, Utah, U.S.A. *Hydrobiologia* 139: 97-107.
730. SHUTE, D., AND N. E. WEST. 1978. The application of ECOSYM vegetation classifications to rangelands near Price, Utah. Appendix reports 14 and 16 in J. A. Henderson and L. S. Davis, eds., *ECOSYM—an ecosystem classification and data storage system for natural resources management*. Unpublished report prepared for Utah State University, Logan. 53 pp.
731. SIGLER, J. W., AND J. S. TUHY, EDS. 1982. Ecological surveys—Altex Oil Leases—southern Utah, October 1981-September 1982. Unpublished report prepared for Altex Oil by W. F. Sigler & Associates Inc., Logan, Utah.
732. SIGLER, J. W., AND J. S. TUHY. 1983. Resource surveys: Tar Sands Triangle, Wayne and Garfield Counties, Utah. Unpublished report prepared for Santa Fe Energy Company, Houston, Texas. 506 pp.
733. SILKER, A. R. 1972. Maintenance and survival of vegetation on the Sunrise Campground, Cache National Forest. Unpublished thesis, Utah State University, Logan. 41 pp.
734. SIMMS, P. L. 1967. The effect of stand density on characteristics of wheatgrasses. Unpublished dissertation, Utah State University, Logan.
735. SIMPSON, J. H. 1859. Report of exploration across the Great Basin of the territory of Utah for a direct wagon route from Camp Floyd to Genoa in Carson Valley. U.S. Government Printing Office, Washington, D.C.
736. SINGH, T. 1967. Quantitative analysis of perennial *Atriplex*-dominated vegetation of southeastern Utah. Unpublished dissertation, Utah State University, Logan. 178 pp.
737. SINGH, T., AND N. E. WEST. 1965. Ordination of shadscale zone vegetation of southeastern Utah. *Bulletin of the Ecological Society of America* 46: 198.
738. SINGH, T., AND N. E. WEST. 1971. Comparison of some multivariate analyses of perennial *Atriplex* vegetation in southeastern Utah. *Vegetatio* 23: 289-313.
739. SKOUGARD, M. G. 1976. Vegetational response to three environmental gradients in a salt playa near Goshen, Utah County. Unpublished thesis, Brigham Young University, Provo, Utah. 75 pp.
740. SKOUGARD, M. G., AND J. D. BROTHERSON. 1979. Vegetational response to three environmental

- gradients in the Salt Playa near Goshen, Utah County, Utah. *Great Basin Naturalist* 39: 44–58.
741. SKOUSEN, J. J., N. DAVIS, AND J. D. BROTHIERSON. 1986. Comparison of vegetation patterns resulting from bulldozing and two-way chaining on a Utah pinyon-juniper big game range. *Great Basin Naturalist* 46: 508–512.
742. SMILEY, F. J. 1915. Alpine and subalpine vegetation of the Lake Tahoe region. *Botanical Gazette* 59: 265–286.
743. SMITH, C. B. 1986. Grazing effects and site factors in relation to grazing use of salt desert shrub, desert experimental range. Unpublished thesis, Utah State University, Logan.
744. SMITH, G. L. 1973. A flora of the Tahoe Basin and neighboring areas. *Wasman Journal of Biology* 31: 1–231.
745. SOLDIER CREEK COAL COMPANY. 1986. Vegetation. Volume 2, part 3, section 3.7, pages 3-161–3-192 in *Mining and Reclamation Plan for Soldier Canyon Mine*, Soldier Creek Coal Company, Utah Division of Oil, Gas and Mining Number ACT/007/018. Salt Lake City, Utah.
746. SOUTHIARD, A. R. 1958. Some characteristics of fine soil profiles under quaking aspen in Cache National Forest. Unpublished thesis, Utah State University, Logan.
747. SPENCE, J. R. 1990. A preliminary review of various vegetation classification schemes for use on the Colorado Plateau, with suggestions for future consideration. Unpublished report prepared for Capitol Reef National Park, Torrey, Utah. 29 pp.
748. ST. JOHN, C. P. 1970. Establishment report for Red Butte Canyon Research Natural Area within Wasatch National Forest, Salt Lake County, Utah. Unpublished report prepared for USDA Forest Service, Washington, D.C. 6 pp.
749. ST. CLAIR, L. L., S. R. RUSHFORTH, AND J. D. BROTHIERSON. 1986. The influence of microhabitat on diversity, distribution, and abundance of corticolous lichens in Zion National Park, Utah, and Navajo National Monument, Arizona. *Mycotaxon* 26: 253–262.
750. STAGER, D. W. 1977. Mule deer response to successional changes in the pinyon-juniper vegetation type after wildfire. Unpublished thesis, University of Nevada, Reno.
751. STANSBURY, H. 1851. Exploration and survey of the valley of the Great Salt Lake of Utah. Senate Document Volume 2, Number 3. U.S. Government Printing Office, Washington, D.C.
752. STANTON, W. D. 1933. The ecology and floristics of the Henry Mountains. *Proceedings of the Utah Academy of Science, Arts and Letters* 10: 25.
753. STEELE, P. L. 1958. The comparative mineral requirements of pioneer and climax range grasses. Unpublished thesis, Brigham Young University, Provo, Utah.
754. STEELE, R., R. D. PFISTER, R. A. RYKER, AND J. A. KITTIMS. 1974. Preliminary habitat types of the Challis, Salmon and Sawtooth National Forests. Unpublished cooperative habitat-type classification report prepared for USDA Forest Service Region IV and Intermountain Forest and Range Experiment Station, Ogden, Utah. 72 pp.
755. STEIN, B. A., AND S. F. WARRICK, EDs. 1979. Granite Mountains resource survey. University of California Environmental Field Program Publication 1. Santa Cruz, California. 361 pp.
756. STEVENS, G. L. 1963. Appraisal of the timber resource potential of the Dixie National Forest. Unpublished thesis, Utah State University, Logan. 75 pp.
757. STEVENS, R. 1983. Description and discussion of field tour sites. Pages 47–49 in *Proceedings of the First Utah Shrub Ecology Workshop*, Utah State University College of Natural Resources, Logan. 50 pp.
758. STEWART, G. 1935. Plant cover and forage conditions on spring-fall and winter ranges, largely on public domain lands of the Intermountain Region. *Utah Juniper* 6: 9–13.
759. STEWART, G. 1941. Historic records bearing on agricultural and grazing ecology in Utah. *Journal of Forestry* 39: 362–375.
760. STEWART, G. 1948. Utah's biological heritage and the need for its conservation. *Proceedings of Utah Academy of Science, Arts and Letters* 25: 5–22.
761. STEWART, G., W. P. COTTAM, AND S. S. HUTCHINGS. 1940. Influence of unrestricted grazing on northern salt desert plant associations in western Utah. *Journal of Agricultural Research* 60: 289–317.
762. STEWART, G., AND W. KELLER. 1936. A correlation method for ecology as exemplified by studies of native desert vegetation. *Ecology* 17: 500–514.
763. STEWART, G., AND J. WIDTSOE. 1943. Contribution of forest land resources to the settlement and development of the Mormon-occupied West. *Journal of Forestry* 41: 633–640.
764. STODDART, L. A. 1941. The palouse grassland association in northern Utah. *Ecology* 22: 158–163.
765. STODDART, L. A. 1945. Range lands of Utah County, Utah, and their utilization. *Utah Agricultural Experiment Station Bulletin* 317. Utah State Agricultural College, Logan. 32 pp.
766. STODDART, L. A., A. H. HOLMGREN, AND C. W. COOK. 1949. Important poisonous plants of Utah. *Utah Agricultural Experiment Station Special Report* 2. Utah State Agricultural College, Logan. 21 pp.
767. STODDART, L. A., P. B. LISTER, G. STEWART, T. D. PHINNEY, AND L. W. DARSON. 1938. Range conditions in the Uinta Basin, Utah. *Utah Agricultural Experiment Station Bulletin* 283. Utah State Agricultural College, Logan. 34 pp.
768. STOKES, W. L. 1977. Subdivisions of the major physiographic provinces in Utah. *Utah Geology* 4: 1–17.
769. STUTZ, H. C. 1951. An ecological study of a sphagnum lake in the subalpine forest of the Uinta Mountains of Utah. Unpublished thesis, Brigham Young University, Provo, Utah. 53 pp.
770. STUTZ, H. C. 1979. The meaning of "rare" and "endangered" in the evolution of western shrubs. *Great Basin Naturalist Memoirs* 3: 119–125.
771. SUMMERFIELD, H. B., JR. 1969. Pedological factors related to the occurrence of big and low sagebrush in northern Washoe County, Nevada. Unpublished thesis, University of Nevada, Reno.
772. SUMMIT COAL COMPANY. 1987. Vegetation resources. Volume 1, chapter 9, sections 9.1–9.3,

- pages 1–6, plus appendix 9-1 in Mining and Reclamation Plan for Boyer Mine, Summit Coal Company. Utah Division of Oil, Gas and Mining Number ACT/043/00S. Salt Lake City, Utah.
773. TANNER, V. M. 1940a. A chapter on the natural history of the Great Basin, 1800 to 1855. *Great Basin Naturalist* 1: 33–61.
774. TANNER, V. M. 1940b. A biotic study of the Kaiparowitz region of Utah. *Great Basin Naturalist* 1: 97–126.
775. TANNER, V. M., AND C. L. HAYWARD. 1934. A biological study of the La Sal Mountains, Utah. Report I. Utah Academy of Sciences, Arts and Letters 11: 209–235.
776. TAUSCH, R. J. 1973. Plant succession and mule deer utilization on pinyon-juniper chainings in Nevada. Unpublished thesis, University of Nevada, Reno.
777. TAUSCH, R. J. 1980. Allometric analysis of plant growth in woodland communities. Unpublished dissertation, Utah State University, Logan.
778. TAUSCH, R. J., AND P. T. TUELLER. 1977. Plant succession following chaining of pinyon-juniper woodlands in eastern Nevada. *Journal of Range Management* 30: 44–49.
779. TAUSCH, R. J., AND P. T. TUELLER. 1989. Evaluation of pinyon sapwood to phytomass relationships over different site conditions. *Journal of Range Management* 42: 209–212.
780. TAUSCH, R. J., N. E. WEST, AND A. A. NABI. 1981. Tree age and dominance patterns in Great Basin pinyon-juniper woodlands. *Journal of Range Management* 34: 259–264.
781. TAUSCH, R. J., AND N. E. WEST. 1985. Patterns of pinyon and juniper establishment on a southwestern Utah site. Abstracts of the annual meetings of the Society for Range Management, #78.
782. TAUSCH, R. J., AND N. E. WEST. 1986. Morphological variation/precipitation relationships of Great Basin single-needled pinyon. Pages 86–91 in Pinyon-Juniper Conference Proceedings, USDA Forest Service General Technical Report INT-215. Intermountain Forest and Range Experiment Station, Ogden, Utah. 91 pp.
783. TAUSCH, R. J., AND N. E. WEST. 1988. Differential establishment of pinyon and juniper following fire. *American Midland Naturalist* 119: 174–184.
784. TECHNICAL COMMITTEE. 1971. Vegetation of the Lake Tahoe region. A guide for planning. Unpublished report prepared for the Tahoe Regional Planning Agency and USDA Forest Service Planning Team, South Lake Tahoe, California. 43 pp.
785. TEPEDINO, V. J. 1979. The importance of bees and other insect pollinators in maintaining floral species composition. *Great Basin Naturalist Memoirs* 3: 139–150.
786. TEW, R. K., J. T. LOTT, AND T. M. BLISS. 1988. Ecosystem stratification on the Fishlake National Forest. Unpublished report prepared for USDA Forest Service Fishlake National Forest, Richfield, Utah.
787. THATCHER, A. P., AND V. L. HART. 1974. Spy Mesa yields better understanding of pinyon-juniper in range ecosystems. *Journal of Range Management* 27: 354–357.
788. THOMPSON, R. 1979. Life zones, plant associations and habitat types, Ferron-Price planning units. Unpublished report prepared for USDA Forest Service, Manti-LaSal National Forest, Moab, Utah.
789. THORNE, R. F. 1982. The desert and other transmontane plant communities of southern California. *Aliso* 10: 219–257.
790. THORNE, R. F., B. A. PRIGGE, AND J. HENRICKSON. 1981. Flora of the higher ranges and the Kelso Dunes of the eastern Mojave Desert in California. *Aliso* 10: 71–186.
791. TISDALE, E. W., AND M. HIRONAKA. 1981. The sagebrush-grass region: a review of the ecological literature. University of Idaho Forest, Wildlife, and Range Experiment Station Bulletin 33. Moscow, Idaho.
792. TOWER, J. D. 1970. Vegetation stagnation in three-phase big game exclosures and its effects in determining forage utilization. Unpublished thesis, University of Nevada, Reno.
793. TOWNSEND, T. W. 1966. Plant characteristics relating to the desirability of rehabilitating the *Arctostaphylos patula* – *Ceanothus velutinus* – *Ceanothus prostratus* association on the east slope of the Sierra Nevada. Unpublished thesis, University of Nevada, Reno.
794. TRUEBLOOD, R. W. 1954. The effect of grass reseeding in sagebrush lands on sage grouse populations. Unpublished thesis, Utah State Agricultural College, Logan. 77 pp.
795. TUELLER, P. T. 1973. Secondary succession, climax, and range condition standards in desert shrub vegetation. Pages 57–65 in D. N. Hyders, ed., *Arid Shrublands*, Proceedings of the Third Workshop of the U.S./Australia Rangelands Panel, 26 March–5 April 1973, Tucson, Arizona.
796. TUELLER, P. T. 1975. The natural vegetation of Nevada. Low deserts, high mountains provide contrasts from shadscale shrub to ancient bristlecones. *Mentzelia* 1: 3–6, 23–28.
797. TUELLER, P. T. 1985. Sagebrush-dominated vegetation of the Great Basin. Pages 24–30 in Proceedings, 38th annual meeting of the Society for Range Management, 11–15 February 1985, Salt Lake City, Utah.
798. TUELLER, P. T., C. D. BEESON, R. J. TAUSCH, N. E. WEST, AND K. H. REA. 1979. Pinyon-juniper woodlands of the Great Basin: distribution, flora and vegetal cover. USDA Forest Service Research Paper INT-229. Intermountain Forest and Range Experiment Station, Ogden, Utah. 22 pp.
799. TUELLER, P. T., AND W. H. BLACKBURN. 1974. Condition and trend of the big sagebrush/needle-and-thread habitat type in Nevada. *Journal of Range Management* 27: 36–40.
800. TUELLER, P. T., AND J. E. CLARK. 1975. Autecology of pinyon-juniper species of the Great Basin and Colorado Plateau. Pages 27–39 in G. F. Gifford, and F. E. Busby, eds., *The Pinyon-Juniper Ecosystem: A Symposium*. Utah State University, Logan.
801. TUELLER, P. T., AND R. E. ECKERT, JR. 1987. Big sagebrush (*Artemisia tridentata vaseyana*) and longleaf snowberry (*Symphoricarpos oreophilus*) plant associations in northeastern Nevada. *Great Basin Naturalist* 47: 117–131.
802. TUELLER, P. T., D. H. HEINZE, AND R. E. ECKERT. 1966. A tentative list of existing Nevada plant

- communities (a third approximation). Unpublished report prepared for University of Nevada, Department of Range, Wildlife and Forestry, Reno. 14 pp.
803. TUELLER, P. T. AND J. D. TOWER. 1979. Vegetation stagnation in three-phase big game exclosures. *Journal of Range Management* 32: 250-263.
804. TUIBY, J. S. AND J. A. MACMAHON. 1988. Vegetation and relict communities of Glen Canyon National Recreation Area. Unpublished final report prepared by Utah State University for USDI National Park Service Rocky Mountain Region, Lakewood, Colorado. 299 pp.
805. USDA. 1871. The Great Salt Lake. Pages 559-569 in 1870 Report of the Commission on Agriculture. Unpublished report prepared for USDA, Washington, D.C.
806. USDA SOIL CONSERVATION SERVICE. 1981. Land resource regions and major land resource areas of the United States. USDA Soil Conservation Service Agriculture Handbook 296. Washington, D.C. 156 pp.
807. USDA SOIL CONSERVATION SERVICE. 1988a. Major land resource area 28A—Great Salt Lake area—Nevada site descriptions. Unpublished internal technical guide, section IIE. Reno, Nevada.
808. USDA SOIL CONSERVATION SERVICE. 1988b. Major land resource area 28B. Central Nevada Basin and Range. Nevada site descriptions. Unpublished internal technical guide, section IIB. Reno, Nevada.
809. USDI BUREAU OF LAND MANAGEMENT. 1972. History of range fires in the Uinta Basin, Utah. Unpublished report.
810. USDI NATIONAL PARK SERVICE. 1974. Wilderness recommendation: Lake Mead National Recreation Area: Arizona-Nevada. Unpublished report prepared for USDI National Park Service, Denver Service Center, Denver, Colorado. 80 pp.
811. U.S. FUEL COMPANY. 1980. Vegetation. Volume 3, chapter 9, sections 9.1-9.3, pages IX-1-IX-76 in Mining and Reclamation Plan for Hiawatha Mines Complex, U.S. Fuel Company. Utah Division of Oil, Gas and Mining Number ACT/007/011. Salt Lake City, Utah.
812. UTAH DIVISION OF WILDLIFE RESOURCES AND ECOLOGY CONSULTANTS, INC. 1977. Annotated bibliography of natural resource information: southern Utah. USDI Fish and Wildlife Service, Biological Services Program FWS/OBS-77/34. Fort Collins, Colorado. 265 pp.
813. UTAH ENVIRONMENTAL AND AGRICULTURAL CONSULTANTS. 1973. Environmental setting, impact, mitigation, and recommendations for a proposed oil products pipeline between Lisbon Valley, Utah, and Parachute Creek, Colorado. Unpublished report prepared for Colony Development Operations, Denver, Colorado.
814. UTAH INTERNATIONAL INCORPORATED. 1987. Vegetation. Volume 14, section 6, pages 6-1-6-53 in Mining and Reclamation Plan for Alton Mine, Utah International Incorporated. Utah Division of Oil, Gas and Mining Number ACT/025/003. Salt Lake City, Utah.
815. UTAH STATE UNIVERSITY. 1978. Rehabilitation potential for the Henry Mountain coal field EMRIA Report 15. Pages 102-108 and 199-203 in Vol. 1, Energy mineral rehabilitation inventory and analysis in the mountain coal fields of Garfield County, Utah. Unpublished report prepared for USDI Bureau of Land Management by Utah State University, Logan. 203 pp.
816. VALE, T. R. 1973. The sagebrush landscape of the Intermountain West. Unpublished dissertation, University of California, Berkeley. 508 pp.
817. VALE, T. R. 1975. Presettlement vegetation in the sagebrush-grass area of the Intermountain West. *Journal of Range Management* 28: 32-36.
818. VALENTINE, J. F. 1961. Important Utah range grasses. Utah State University Extension Circular 251. Logan, Utah.
819. VALLEY CAMP OF UTAH INCORPORATED. 1984. Vegetation. Volume 6, section 783.19, pages 15D-15N32 in Mining and Reclamation Plan for Belina Mines Complex, Valley Camp of Utah Incorporated. Utah Division of Oil, Gas and Mining Number ACT/007/001. Salt Lake City, Utah.
820. VALLEY ENGINEERING INCORPORATED. 1988. Vegetation and terrestrial wildlife report. Volume 3, chapter 9, item 9-1, pages 1-35 in Mining and Reclamation Plan for Crandall Canyon Mine, Genwal Coal Company. Utah Division of Oil, Gas and Mining Number ACT/015/032. Salt Lake City, Utah.
821. VAN BALEN, J. A. 1973. Plant cover types of the upper Bear River drainage, Utah. Unpublished thesis, University of Utah, Salt Lake City.
822. VAN PELT, N. S. 1978. Woodland parks in southeastern Utah. Unpublished thesis, University of Utah, Salt Lake City.
823. VAN PELT, N. S. 1988. Baseline description of a native sagebrush/grass reference area at Wildeat Loadout. Volume 1, appendix 1, pages 1-5 in Mining and Reclamation Plan for Wildeat Loadout Facility, Andalex Resources. Utah Division of Oil, Gas and Mining Number ACT/007/033. Salt Lake City, Utah.
824. VAN PELT, N. S., R. STEVENS, AND N. E. WEST. 1989. Comparative survival and growth of immature Utah juniper after chaining in central Utah. Abstracts of the annual meeting of the Society for Range Management #287.
825. VEST, E. D. 1962a. Biotic communities in the Great Salt Lake Desert. University of Utah Institute of Environmental Biological Research, Ecology and Epizooology Series 73. Salt Lake City, Utah. 122 pp.
826. VEST, E. D. 1962b. The plant communities and associated fauna of Dugway Valley in western Utah. Unpublished thesis, University of Utah, Salt Lake City.
827. WAGNER, W. W. 1973. Cesium-137 accumulation and distribution in plants and soils of an alpine community of Utah. Unpublished dissertation, University of Utah, Salt Lake City. 267 pp.
828. WAKEFIELD, H. 1933. A study of the plant ecology of Salt Lake and Utah valleys before the Mormon immigration. Unpublished thesis, Brigham Young University, Provo, Utah. 54 pp.
829. WAKEFIELD, H. 1936. A study of the native vegetation of Salt Lake and Utah valleys as determined by historical evidence. *Proceedings of Utah Academy of Science, Arts and Letters* 13: 11-18.

830. WALKER, G. R., AND J. D. BROTHERRSON. 1982. Habitat relationships of basin wildrye in the high mountain valleys of central Utah. *Journal of Range Management* 35: 628-633.
831. WALLACE, A., AND E. M. ROMNEY. 1980. The role of pioneer species in revegetation of disturbed desert areas. *Great Basin Naturalist Memoirs* 4: 31-33.
832. WALLACE, A., E. M. ROMNEY, AND R. B. HUNTER. 1980. The challenge of a desert: revegetation of disturbed desert lands. *Great Basin Naturalist Memoirs* 4: 216-225.
833. WALLIS, C. A. 1982. An overview of the mixed grasslands of North America. Pages 195-208 in A. C. Nicholson, A. Mclean, and T. E. Baker, eds., *Proceedings of the Grassland Ecology and Classification Symposium*, 2-4 June 1982, Kamloops, British Columbia. Province of British Columbia Ministry of Forests, Victoria.
834. WARD, K. V. 1977. Two-year vegetation response and successional trends for spring burns in the pinyon-juniper woodland. Unpublished thesis, University of Nevada, Reno.
835. WARNER, J. H., AND K. T. HARPER. 1972. Understory characteristics related to site quality for aspen in Utah. *Brigham Young University Science Bulletin*, Biological Series 16: 1-20.
836. WATSON, S. 1871. Botany. In: C. King, ed., *Report of the geological exploration of the Fortieth Parallel*, Volume 5. U.S. Army Corps of Engineers Professional Paper 18. 525 pp.
837. WEBB, G. M., AND J. D. BROTHERRSON. 1988. Elevational changes in woody vegetation along three streams in Washington County, Utah. *Great Basin Naturalist* 48: 512-529.
838. WEBB, R. H., J. W. STEIGER, AND R. M. TURNER. 1987. Dynamics of Mojave Desert shrub assemblages in the Panamint Mountains, California. *Ecology* 68: 478-490.
839. WEHRLIE, L. J. 1973. Vegetation analysis of a Sierra Nevada montane coniferous forest. Unpublished thesis, University of Nevada, Reno.
840. WEIR, G. H. 1976. Palynology, flora and vegetation of Hovenweep National Monument: implications for aboriginal plant use on Cajon Mesa, Colorado and Utah. *Botany* 3749-B (abstract).
841. WELLS, P. V. 1960. Physiognomie intergradation of vegetation on the Pine Valley Mountains in southwestern Utah. *Ecology* 41: 553-556.
842. WELLS, P. V. 1961. Succession in desert vegetation on streets of a Nevada ghost town. *Science* 134: 670-671.
843. WELLS, P. V. 1983. Paleobiogeography of montane islands in the Great Basin since the last glaciopluvial. *Ecological Monographs* 53: 341-382.
844. WELLS, P. V., AND L. M. SHIELDS. 1964. Distribution of *Larrea divaricata* in relation to a temperature inversion at Yucca Flat, southern Nevada. *Southwestern Naturalist* 9: 51-55.
845. WELSH, S. L. 1957. An ecological survey of the vegetation of the Dinosaur National Monument, Utah. Unpublished thesis, Brigham Young University, Provo. 86 pp.
846. WELSH, S. L. 1970. Vegetation of the Colorado Plateau, its phytogeographic distinction from the Great Basin. Unpublished manuscript prepared for Brigham Young University, Provo, Utah. 29 pp.
847. WELSH, S. L. 1979. Endangered and threatened plants of Utah: a case study. *Great Basin Naturalist Memoirs* 3: 64-80.
848. WELSH, S. L., N. D. ATWOOD, L. C. HIGGINS, AND S. GOODRICH. 1987. A Utah flora. *Great Basin Naturalist Memoirs* 9. 894 pp.
849. WELSH, S. L., AND E. M. CHRISTENSEN. 1957. An ecological study of the vegetation of the Dinosaur National Monument. *Proceedings of the Utah Academy of Science, Arts and Letters* 34: 55-56.
850. WELSH, S. L., AND R. J. KASS. 1985. Vegetation monitoring of reclaimed slopes and corresponding reference areas at the Skyline Mine, 1985. Appendix volume A2, pages 1-29 in *Mining and Reclamation Plan for Skyline Mine*, Utah Fuel Company. Utah Division of Oil, Gas and Mining Number ACT/007/005. Salt Lake City, Utah.
851. WELSH, S. L., AND J. R. MURDOCK. 1980. Report of vegetation, plant community analysis, threatened and endangered plant species, soils, and reclamation plans for Coastal States Energy Company, McKinnon Properties, Skyline Project, Carbon-Emercy Counties, Utah. Appendix volume A2, pages 1-135 in *Mining and Reclamation Plan for Skyline Mine*, Utah Fuel Company. Utah Division of Oil, Gas and Mining Number ACT/007/005. Salt Lake City, Utah.
852. WELSH, S. L., AND J. R. MURDOCK. 1982. Report of revegetation success and vegetation monitoring of reclaimed and reference areas at Skyline Mine during the 1982 field season. Appendix volume A2, pages 1-27, plus appendices I, II, III in *Mining and Reclamation Plan for Skyline Mine*, Utah Fuel Company. Utah Division of Oil, Gas and Mining Number ACT/007/005. Salt Lake City, Utah.
853. WELSH, S. L., J. R. MURDOCK, L. JUARROS, AND E. NEESE. 1981. Report of studies of vegetation and soils for Coastal States Energy Company Convulsion Canyon Mine of Southern Utah Fuel Company (SUFCO), Sevier County, Utah. Volume 5, pages 1-11 and 39-78 in *Mining and Reclamation Plan for Convulsion Canyon Mine*, Southern Utah Fuel Company. Utah Division of Oil, Gas and Mining Number ACT/041/002. Salt Lake City, Utah.
854. WELSH, S. L., AND C. A. TOFT. 1981. Biotic communities of hanging gardens in southeastern Utah. *National Geographic Society Research Reports* 13: 663-681.
855. WEST, N. E. 1966a. Ecology and management of salt desert shrub ranges: a bibliography. *Wyoming Range Management* 228: 147-167. Revised and reprinted 1968, Utah Agricultural Experiment Station Mimeograph Series 505. 30 pp.
856. WEST, N. E. 1966b. Research on the ecology of the Utah salt desert areas. Pages 160-169 in *Proceedings of the Salt Desert Shrub Symposium*. USDI, Bureau of Land Management, Cedar City, Utah.
857. WEST, N. E. 1971. Pinyon-juniper ranges. Unpublished report prepared for Utah State University, Department of Natural Resources, Logan. 28 pp.
858. WEST, N. E. 1974. The shrublands of Utah. *Utah Science* 35: 4-6.
859. WEST, N. E. 1977. An ecologist's thoughts toward determining the recreational carrying capacity of

- white water sections of the Upper Colorado River drainage. Pages 125–145 in L. E. Royer, W. H. Becker, and R. Schreyer, eds., *Managing Colorado River whitewater: the carrying capacity strategy*. Institute for the Study of Outdoor Recreation and Tourism, Utah State University, Logan.
860. WEST, N. E. 1978a. Basic synecological relationships of sagebrush-dominated lands in the Great Basin and Colorado Plateau. Pages 33–41 in G. F. Gifford and F. E. Busby, eds., *The Sagebrush Ecosystem, a Symposium*. Utah State University, College of Natural Resources, Logan. 251 pp.
861. WEST, N. E. 1978b. The changing woodlands of the Great Basin. Utah State University, College of Natural Resources. *Edge: Natural Resources/People I*: 13–16.
862. WEST, N. E. 1979. Survival patterns of major perennials in salt desert shrub communities of southwestern Utah. *Journal of Range Management* 32: 442–445.
863. WEST, N. E. 1982. Approaches to synecological characterization of wildlands in the Intermountain West. Pages 633–641 in T. C. Brann, ed., *In-place resource inventories—principles and practices*. A national workshop, University of Maine, Orono. Society of American Foresters, 9–14 August 1981, McClean, Virginia.
864. WEST, N. E. 1983a. Great Basin–Colorado Plateau sagebrush semi-desert. Pages 331–349 in N. E. West, ed., *Temperate deserts and semi-deserts. Ecosystems of the world*, Vol. 5. Elsevier Publishing Company, Amsterdam.
865. WEST, N. E. 1983b. Western Intermountain sagebrush steppe. Pages 351–374 in N. E. West, ed., *Temperate deserts and semi-deserts. Ecosystems of the world*, Vol. 5. Elsevier Publishing Company, Amsterdam.
866. WEST, N. E. 1983c. Intermountain salt desert shrublands. Pages 375–397 in N. E. West, ed., *Temperate deserts and semi-deserts. Ecosystems of the world*, Vol. 5. Elsevier Publishing Company, Amsterdam.
867. WEST, N. E. 1983d. Colorado Plateau-Mohavian blackbrush semi-desert. Pages 399–412 in N. E. West, ed., *Temperate deserts and semi-deserts. Ecosystems of the world*, Vol. 5. Elsevier Publishing Company, Amsterdam.
868. WEST, N. E. 1983e. Southeastern Utah galleta-three awn shrub steppe. Pages 413–421 in N. E. West, ed., *Temperate deserts and semi-deserts. Ecosystems of the world*, Vol. 5. Elsevier Publishing Company, Amsterdam.
869. WEST, N. E. 1984. Successional patterns and productivity potentials of pinyon-juniper woodlands. Pages 1301–1332 in *Natural Resources Council/National Academy of Sciences, Developing strategies for rangeland management*. Westview Press, Boulder, Colorado.
870. WEST, N. E. 1987. Human impacts on vegetation of the semi-arid temperate intermountain region of western North America. Page 398 in *Abstract of the XIV International Botanical Congress, Berlin (West)*, Germany.
871. WEST, N. E. 1988. Intermountain deserts, shrub steppes and woodlands. Pages 209–230 in M. G. Barbour and W. D. Billings, eds., *North American terrestrial vegetation*. Cambridge University Press, New York.
872. WEST, N. E. 1989. Vegetation types of Utah. Pages 18–51 in K. Johnson, ed., *Rangelands of Utah*. Utah State University Press, Logan.
873. WEST, N. E. AND M. M. BAASHER. 1968. Determination of adequate plot size by use of mean distance between salt desert shrubs. *Southwestern Naturalist* 13: 61–74.
874. WEST, N. E., AND J. E. BOWNS. 1988. Shrubland, grassland, shrubsteppe and woodland vegetation of the northern Mohave Desert, southwestern Utah and northwestern Arizona. Pages 73–81 in J. L. Vankat, ed., *Vegetation of the southwestern United States. A handbook for the 1988 excursion of the International Association for Vegetation Science. Special Publication 1*. North American Section International Association for Vegetation Science.
875. WEST, N. E., D. CAIN, AND G. GIFFORD. 1973. Biology, ecology and renewable resource management of the pigmy conifer woodlands of western North America: a bibliography. Utah Agricultural Experiment Station Research Report 12. Logan, Utah. 36 pp.
876. WEST, N. E., AND M. M. CALDWELL. 1983. Snow as a factor in salt desert shrub vegetation patterns in Curlew Valley, Utah. *American Midland Naturalist* 109: 376–379.
877. WEST, N. E., G. B. COLTHARP, J. P. WORKMAN, R. W. WEIN, V. B. HANCOCK, K. SIMONSON, AND J. KEITH. 1973. Vegetational micro-climate, edaphic, hydrologic and economic effects of contour furrows and gully plugs on frail lands near Cisco, Utah. Utah Agricultural Experiment Station Technical Bulletin (manuscript). Logan, Utah.
878. WEST, N. E., AND J. GASTO. 1978. Phenology of the aerial portions of shadscale and winterfat in Curlew Valley, Utah. *Journal of Range Management* 31: 43–45.
879. WEST, N. E., AND K. I. IBRAHIM. 1968. Soil-vegetation relationships in the shadscale zone of southeastern Utah. *Ecology* 49: 445–456.
880. WEST, N. E., AND W. L. LOOPE. 1980. Occurrence of wildfires in Zion National Park in relation to ecosystem and record-taking variables. Pages 21–28 in *Proceedings of Second Conference on Scientific Research in the National Parks. Vol. X, Fire ecology*. USDA, National Park Service Transactions and Proceedings Series 6. Washington, D.C.
881. WEST, N. E., AND M. H. MADANY. 1981. Fire history of the Horse Pasture Plateau, Zion National Park. University of Utah–National Park Service Cooperative Studies Unit Final Report. 225 pp.
882. WEST, N. E., R. T. MOORE, K. A. VALENTINE, L. W. LAW, P. R. OGDEN, F. C. PINKNEY, P. T. TUELLER, AND A. A. BEETLE. 1972. Galleta: taxonomy, ecology, and management of *Hilaria jamesii* on western rangelands. Utah Agricultural Experiment Station Bulletin 487. Logan, Utah.
883. WEST, N. E., F. D. PROVENZA, P. S. JOHNSON, AND M. K. OWENS. 1984. Vegetation change after 13 years of livestock grazing exclusion on sagebrush semidesert in west central Utah. *Journal of Range Management* 37: 262–264.

884. WEST, N. E., K. H. REA, AND R. J. TAUSCH. 1975. Basic synecological relationships in juniper-pinyon woodlands. Pages 41–53 in G. F. Gifford and F. E. Bushy, eds., Proceedings of the Pinyon-Juniper Ecosystem Symposium, Utah Agricultural Experiment Station, Logan.
885. WEST, N. E., R. J. TAUSCH, AND A. A. NABL. 1979. Patterns and rates of pinyon-juniper invasion and degree of suppression of understory vegetation in the Great Basin. USDA Forest Service Intermountain Region Range Improvement Notes, Ogden, Utah. 14 pp.
886. WEST, N. E., R. J. TAUSCH, K. H. REA, AND A. R. SOUTHARD. 1978a. Soils associated with pinyon-juniper woodlands of the Great Basin. Pages 68–88 in C. T. Youngberg, ed., Forest soils and land use, Proceedings of the Fifth North American Forest and Soils Conference, Colorado State University, Fort Collins, Colorado.
887. WEST, N. E., R. J. TAUSCH, K. H. REA, AND P. T. TUELLER. 1978b. Taxonomic determination, distribution, and ecological indicator values of sagebrush within the pinyon-juniper woodlands of the Great Basin. Journal of Range Management 31: 87–92.
888. WEST, N. E., R. J. TAUSCH, K. H. REA, AND P. T. TUELLER. 1979. Phytogeographical variation within juniper-pinyon woodlands of the Great Basin. In: K. T. Harper and J. L. Reveal, coords., Intermountain biogeography: a symposium. Great Basin Naturalist Memoirs 2: 119–136.
889. WEST, N. E., AND P. T. TUELLER. 1972. Special approaches to studies of competition and succession in shrub communities. Pages 165–171 in C. M. McKell, J. P. Blaisdell, and J. R. Goodin, eds., Wildland shrubs: their biology and utilization. USDA Forest Service General Technical Report INT-1. Intermountain Forest and Range Experiment Station, Ogden, Utah.
890. WEST, N. E., AND N. S. VAN PELT. 1987. Successional patterns in pinyon-juniper woodlands. Pages 43–52 in R. L. Everett, compiler, Proceedings—Pinyon-Juniper Conference. USDA Forest Service General Technical Report INT-215. Intermountain Research Station, Ogden, Utah.
891. WHEELER, N. C., AND P. GURIES. 1982. Biogeography of lodgepole pine. Canadian Journal of Botany 60: 1805–1814.
892. WHIPPLE, A. W. 1854. Report of exploration for a railway route near the 35th Parallel of latitude from the Mississippi River to the Pacific Ocean. 37th Congress, 2nd Session, House Document 129, Volume 4. Washington, D.C. 154 pp.
893. WHITE, J. A. 1971. Climate, plant, soil, and water relationships to a wildlife plan. Unpublished thesis, University of Nevada, Reno.
894. WHITE, W. N. 1932. A method of estimating groundwater supplies based on discharge by plants and evaporation from soil—results of investigations in Escalante Valley, Utah. USDI Geological Survey Water Supply Paper 659(A). Denver, Colorado. 105 pp.
895. WIESLANDER, A. E. 1932. Vegetation type maps of California and western Nevada. University of California Press, Berkeley.
896. WILCOX, R. B. 1977. Canopy influence as a factor in determining understory community composition. Unpublished thesis, Brigham Young University, Provo, Utah. 42 pp.
897. WILCOX, R. B., J. D. BROTHERTON, AND W. E. EVENSON. 1981. Canopy influence on understory community composition. Northwest Science 55: 194–201.
898. WILLIAMS, G. 1969. Analysis of hydrologic, edaphic, and vegetative factors affecting infiltration and erosion on certain treated and untreated pinyon-juniper sites. Unpublished dissertation, Utah State University, Logan.
899. WILLIAMS, J. E., D. BOWMAN, J. BROOKS, A. ECHELLE, R. EDWARDS, D. A. HENDRICKSON, AND J. J. LANDYE. 1985. Endangered aquatic ecosystems in North American deserts with a list of vanishing fishes of the region. Journal of Arizona-Nevada Academy of Science 20: 1–62.
900. WILSON, R. O. 1985. Aerial and near surface spectral characteristics of eight Nevada rangeland communities. Unpublished thesis, University of Nevada, Reno.
901. WINDELL, J. T., B. E. WILLARD, D. J. COOPER, S. Q. FOSTER, C. F. KNUD-HANSEN, L. P. RINK, AND G. N. KILADIS. 1986. An ecological characterization of Rocky Mountain montane and subalpine wetlands. USDI Fish and Wildlife Service Biological Report 86(11). 298 pp.
902. WINN, D. S. 1976. Terrestrial vertebrate fauna and selected coniferous forest habitat types on the north slope of the Uinta Mountains. Unpublished report prepared for USDA Forest Service, Wasatch National Forest, Ogden, Utah. 145 pp.
903. WOOD, B. W. 1966. An ecological life history of budsage in western Utah. Unpublished thesis, Brigham Young University, Provo, Utah. 85 pp.
904. WOOD, B. W., AND J. D. BROTHERTON. 1984. Ecological adaptation and grazing response of budsage (*Artemisia spinescens*) in southwestern Utah. Pages 75–92 in Proceedings—Symposium on the Biology of *Artemisia* and *Chrysothamnus*. USDA Forest Service General Technical Report INT-200. Intermountain Research Station, Ogden, Utah.
905. WOOD, B. W., S. L. WELSH, AND J. R. MURDOCK. 1975. The vegetation of the Kaiparowits region: an overview. Pages 249–302 in J. R. Murdock, S. L. Welsh, and B. W. Wood, eds., Navajo-Kaiparowits environmental baseline studies 1971–1974. Unpublished report prepared for Brigham Young University, Center for Health and Environmental Studies, Provo, Utah. 864 pp.
906. WOODBURY, A. M. 1933. Biotic relationship of Zion Canyon, Utah, with special reference to succession. Ecological Monographs 3: 148–245.
907. WOODBURY, A. M. 1938. The lower Sonoran in southwestern Utah. Science 87: 484–485.
908. WOODBURY, A. M. 1947. Distribution of pigmy conifers in Utah and northeastern Arizona. Ecology 28: 113–126.
909. WOODBURY, A. M. 1956. Ecological checklists, Great Salt Lake Desert Series. Unpublished report prepared for University of Utah, Salt Lake City.

910. WOODBURY, A. M., S. D. DURRANT, AND S. FLOWERS. 1959. Survey of vegetation in the Glen Canyon Reservoir Basin. University of Utah Anthropological Papers 36. Salt Lake City, Utah. 53 pp.
911. WOODBURY, A. M., S. D. DURRANT, S. FLOWERS. 1960. A survey of the vegetation in the Flaming Gorge Reservoir Basin. University of Utah Anthropological Papers 45. Salt Lake City, Utah. 121 pp.
912. WOODBURY, W. V. 1966. The history and present status of the biota of Anaho Island, Pyramid Lake, Nevada. Unpublished thesis, University of Nevada, Reno.
913. WORKMAN, G. W., N. E. WEST, B. HAWS, AND C. HURST. 1983. Aquatic and riparian ecological relationships of the North Fork of the Virgin River and its Deep Creek-Crystal Creek Tributary, Zion National Park, Utah. Unpublished report prepared for Department of Fisheries and Wildlife, Utah State University, Logan. 272 pp.
914. WRIGHT, H. A. 1964. An evaluation of several factors to determine why *Sitanion hystrix* is more resistant to burning than *Stipa comata*. Unpublished dissertation, Utah State University, Logan.
915. WRIGHT, H. A. 1980. The role and use of fire in the semi-desert grass-shrub type. USDA Forest Service General Technical Report INT-85. Intermountain Forest and Range Experiment Station, Ogden, Utah. 23 pp.
916. WRIGHT, H. A., L. F. NEUENSCHWANDER, AND C. M. BRITTON. 1981. The role and use of fire in sagebrush-grass and pinyon-juniper plant communities. USDA Forest Service General Technical Report INT-58. Intermountain Forest and Range Experiment Station, Ogden, Utah.
917. WYCKOFF, J. W. 1973. The effects of soil texture on species diversity in an arid grassland of the eastern Great Basin. *Great Basin Naturalist* 33: 163-168.
918. YAKE, S., AND J. D. BROTHIERSON. 1979. Differentiation of serviceberry habitats in the Wasatch Mountains of Utah. *Journal of Range Management* 32: 379-386.
919. YOUNG, J. A. 1981. Demography and fire history of a western juniper stand. *Journal of Range Management* 34: 501-505.
920. YOUNG, J. A., AND J. D. BUDY. 1979. Historical use of Nevada's pinyon-juniper woodlands. *Journal of Forestry History* 23: 112-121.
921. YOUNG, J. A., AND R. A. EVANS. 1970. Invasion of medusahead into the Great Basin. *Weed Science* 18: 89-97.
922. YOUNG, J. A., AND R. A. EVANS. 1973. Downy brome—intruder in the plant succession of big sagebrush communities in the Great Basin. *Journal of Range Management* 26: 410-415.
923. YOUNG, J. A., AND R. A. EVANS. 1974. Population dynamics of green rabbitbrush in disturbed big sagebrush communities. *Journal of Range Management* 27: 127-132.
924. YOUNG, J. A., AND R. A. EVANS. 1978. Population dynamics after wildfires in sagebrush grasslands. *Journal of Range Management* 31: 283-289.
925. YOUNG, J. A., R. A. EVANS, AND R. E. ECKERT. 1985. Successional patterns and productivity potentials of the sagebrush and salt desert ecosystems. In: Developing strategies for rangeland management, National Academy of Science. Westview Press, Boulder, Colorado.
926. YOUNG, J. A., R. A. EVANS, B. A. ROUNDY, AND J. A. BROWN. 1986. Dynamic landforms and plant communities in a pluvial lake basin. *Great Basin Naturalist* 46: 1-21.
927. YOUNG, J. A., R. A. EVANS, P. T. TUELLER. 1976. Great Basin plant communities—pristine and grazed. Pages 186-215 in R. Elston, and P. Headrick, eds., Holocene environmental change in the Great Basin. Nevada Archeological Survey Research Paper 6. Reno, Nevada.
928. YOUNG, S. 1958. Exlosures in big game management in Utah. *Journal of Range Management* 11: 186-190.
929. YOUNGBLOOD, A. P., AND R. L. MAUK. 1985. Coniferous forest habitat types of central and southern Utah. USDA Forest Service General Technical Report INT-187. Intermountain Research Station, Ogden, Utah. 89 pp.
930. ZAMORA, B. 1968. *Artemisia arbuscula*, *Artemisia longiloba*, and *Artemisia nova* plant associations in central and northern Nevada. Unpublished thesis, University of Nevada, Reno.
931. ZAMORA, B., AND P. T. TUELLER. 1973. *Artemisia arbuscula*, *A. longiloba*, and *A. nova* habitat types in northern Nevada. *Great Basin Naturalist* 33: 225-242.
932. ZAN, M. 1968. Evaluation of the effects of reduced transpiration upon soil moisture retentions in an aspen stand throughout the growing season in northern Utah. Unpublished thesis, Utah State University, Logan. 49 pp.
933. ZARN, M. 1977. Ecological characteristics of pinyon-juniper woodlands on the Colorado Plateau. A literature survey. USDI Bureau of Land Management Technical Note 310. Denver, Colorado. 183 pp.
934. ZOHNER, K. D. 1967. A guide to the biogeographic literature of Utah. Unpublished thesis, University of Utah, Salt Lake City. 83 pp.

KEYWORD-CITATION INDEX

age-size structure 1, 125, 126, 134, 561
 alpine 3, 62, 63, 74, 114, 115, 164, 376, 390, 480, 495, 503, 559, 571, 698, 699, 700, 711, 742, 827
 autecology 21, 22, 41, 46, 48, 61, 63, 71, 100, 104, 121, 122, 123, 133, 135, 137, 169, 176, 219, 231, 250, 279, 333, 351, 353, 355, 366, 379, 400, 402, 405, 438, 455, 494, 507, 543, 580, 616, 620, 649, 656, 687, 688, 717, 734, 766, 797, 800, 818, 830, 833, 844, 859, 882, 891, 903, 904, 918, 921
 baseline study 7, 8, 10, 11, 16, 18, 19, 20, 30, 31, 32, 33, 36, 46, 53, 54, 55, 56, 57, 65, 75, 76, 89, 98, 112, 117, 118, 119, 143, 151, 154, 156, 160, 163, 173, 174, 175, 185, 186, 193, 195, 196, 197, 198, 200, 204, 205, 206, 208, 210, 211, 221, 222, 227, 229, 236, 242, 243, 244, 246, 247, 248, 249, 251, 252, 257, 258, 262, 266, 267, 277, 281, 302, 303, 305, 320, 323, 326, 327, 328, 329, 330, 331, 332, 335, 337, 357, 362, 363, 364, 365, 371, 372, 373, 374, 375, 380, 381, 382, 384, 397, 398, 399, 404, 408, 417, 421, 422, 423, 424, 425, 433, 448, 453, 454,

- 461, 462, 475, 486, 490, 504, 525, 526, 527, 529, 533, 538, 562, 572, 575, 595, 602, 603, 604, 605, 606, 611, 623, 628, 636, 648, 651, 685, 711, 719, 731, 732, 733, 745, 758, 769, 772, 809, 811, 813, 814, 819, 820, 823, 850, 851, 852, 853, 856, 873, 877, 885, 894, 906, 912, 932
- bibliography 183, 184, 304, 600, 791, 812, 855, 875
- biogeography 9, 49, 64, 66, 67, 68, 72, 74, 76, 104, 105, 106, 107, 109, 111, 123, 127, 129, 131, 144, 145, 148, 150, 155, 164, 167, 168, 169, 170, 180, 186, 189, 190, 192, 202, 213, 215, 225, 228, 232, 238, 242, 244, 245, 246, 249, 263, 264, 268, 271, 280, 284, 285, 297, 306, 307, 308, 309, 310, 315, 317, 321, 334, 338, 340, 341, 348, 351, 352, 361, 365, 371, 372, 377, 403, 406, 409, 411, 426, 427, 430, 431, 434, 437, 444, 451, 456, 458, 478, 479, 482, 485, 487, 491, 495, 496, 497, 498, 499, 500, 501, 502, 503, 505, 512, 514, 518, 523, 527, 542, 547, 549, 551, 556, 558, 559, 565, 577, 579, 583, 584, 596, 598, 608, 615, 620, 627, 631, 635, 647, 650, 651, 658, 661, 666, 667, 670, 672, 685, 689, 690, 695, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 716, 718, 721, 727, 729, 739, 742, 744, 749, 752, 755, 760, 771, 775, 789, 790, 796, 798, 802, 805, 806, 807, 808, 810, 816, 825, 840, 843, 845, 846, 864, 866, 867, 872, 878, 887, 891, 899, 907, 908, 910, 925, 934
- classification 13, 51, 69, 138, 212, 280, 293, 393, 396, 444, 457, 459, 460, 522, 546, 560, 613, 614, 730, 747, 754, 786, 788
- community analysis 3, 4, 7, 8, 15, 18, 20, 23, 25, 27, 29, 30, 35, 40, 42, 48, 49, 52, 60, 65, 71, 95, 96, 99, 103, 105, 107, 108, 113, 114, 115, 118, 119, 127, 129, 130, 131, 135, 139, 140, 141, 144, 150, 153, 155, 157, 160, 171, 174, 175, 177, 181, 182, 188, 189, 199, 208, 217, 233, 235, 241, 253, 258, 261, 276, 283, 288, 289, 290, 292, 294, 298, 299, 315, 321, 324, 325, 342, 344, 347, 349, 350, 354, 365, 370, 375, 378, 395, 407, 415, 439, 442, 449, 452, 456, 463, 465, 466, 469, 477, 481, 488, 493, 498, 499, 504, 511, 523, 524, 541, 544, 555, 557, 558, 563, 567, 570, 573, 574, 590, 607, 609, 617, 641, 642, 649, 653, 655, 673, 674, 675, 676, 696, 713, 748, 756, 761, 764, 777, 779, 780, 782, 785, 792, 793, 801, 815, 828, 835, 838, 839, 849, 860, 862, 863, 865, 868, 870, 876, 884, 887, 896, 897, 900, 920, 923, 924, 926, 927, 928, 930, 933
- desert 30, 46, 47, 48, 49, 51, 58, 69, 75, 90, 99, 102, 104, 109, 140, 149, 153, 162, 167, 199, 202, 204, 206, 227, 263, 264, 265, 266, 299, 300, 302, 305, 311, 321, 322, 349, 479, 502, 512, 531, 548, 549, 597, 622, 653, 675, 676, 690, 691, 695, 724, 725, 726, 727, 743, 761, 762, 789, 790, 825, 831, 832, 842, 871, 899, 907
- disturbance 26, 35, 37, 45, 47, 50, 51, 58, 93, 124, 142, 156, 181, 221, 224, 248, 287, 288, 292, 294, 296, 344, 346, 385, 386, 416, 420, 464, 473, 475, 476, 492, 515, 517, 520, 528, 529, 531, 540, 550, 554, 566, 569, 582, 600, 609, 633, 668, 674, 676, 691, 723, 724, 725, 726, 739, 750, 763, 776, 778, 783, 809, 813, 824, 826, 834, 870, 880, 881, 914, 915, 916, 919, 923, 924
- diversity pattern 291, 293, 324, 360, 369, 468, 610, 662, 749, 917
- early exploration 34, 59, 152, 165, 239, 254, 259, 502, 549, 553, 589, 618, 644, 645, 646, 664, 697, 712, 735, 751, 774, 805, 836, 892
- fire 35, 93, 116, 142, 156, 159, 181, 248, 292, 296, 344, 385, 386, 420, 464, 473, 476, 492, 515, 517, 518, 520, 540, 566, 633, 723, 750, 783, 809, 834, 880, 881, 914, 915, 916, 919, 924
- forest 1, 3, 4, 13, 27, 28, 37, 39, 41, 93, 125, 145, 159, 160, 168, 177, 178, 179, 203, 219, 228, 230, 240, 260, 276, 280, 286, 304, 359, 367, 383, 387, 394, 402, 418, 419, 428, 446, 459, 460, 475, 481, 485, 488, 496, 507, 515, 516, 517, 518, 520, 522, 537, 561, 567, 568, 569, 570, 584, 608, 630, 655, 668, 702, 707, 712, 714, 715, 746, 754, 756, 763, 835, 839, 902, 929, 932
- gradient analysis 120, 265, 278, 286, 510, 530, 545, 551, 563, 564, 637, 660, 736, 737, 738, 740, 741, 839
- grassland 29, 34, 91, 110, 113, 176, 180, 214, 224, 262, 274, 278, 282, 283, 319, 340, 345, 347, 354, 355, 356, 357, 368, 438, 466, 467, 468, 469, 470, 510, 511, 514, 574, 598, 611, 612, 616, 624, 637, 682, 701, 708, 713, 728, 734, 753, 764, 817, 818, 833, 874, 916, 917, 924
- grazing 24, 34, 40, 90, 91, 102, 124, 136, 159, 166, 194, 203, 206, 207, 208, 222, 223, 224, 240, 253, 269, 270, 273, 275, 282, 283, 300, 312, 313, 318, 319, 335, 337, 343, 355, 356, 360, 416, 418, 428, 447, 450, 463, 489, 490, 520, 548, 569, 591, 594, 597, 623, 633, 652, 657, 663, 668, 669, 681, 682, 683, 684, 728, 743, 750, 759, 761, 765, 767, 776, 792, 883, 904, 927
- habitat type 3, 4, 13, 78, 92, 122, 137, 155, 212, 394, 395, 488, 537, 684, 754, 788, 799, 902, 929, 931
- inventory 5, 9, 10, 11, 12, 16, 17, 19, 31, 32, 33, 36, 40, 50, 53, 54, 55, 56, 57, 62, 64, 66, 75, 79, 81, 82, 83, 84, 85, 86, 87, 88, 89, 97, 98, 102, 105, 106, 107, 108, 112, 117, 127, 131, 139, 148, 149, 154, 163, 164, 166, 167, 168, 176, 177, 180, 185, 186, 187, 188, 189, 192, 193, 195, 196, 197, 198, 200, 201, 205, 210, 211, 213, 215, 216, 226, 232, 236, 244, 245, 251, 252, 256, 257, 268, 271, 277, 280, 291, 306, 307, 309, 310, 316, 323, 326, 327, 328, 329, 330, 331, 332, 338, 340, 341, 352, 361, 369, 371, 372, 378, 380, 381, 384, 385, 387, 388, 389, 390, 391, 394, 395, 398, 399, 403, 404, 407, 408, 409, 410, 411, 413, 417, 421, 422, 423, 424, 425, 426, 430, 446, 448, 452, 453, 454, 461, 462, 465, 478, 479, 481, 482, 485, 487, 496, 497, 498, 499, 500, 503, 504, 512, 516, 525, 526, 527, 529, 534, 535, 537, 539, 541, 542, 547, 558, 559, 565, 568, 570, 575, 577, 583, 587, 595, 601, 602, 603, 604, 605, 606, 615, 616, 622, 626, 627, 628, 631, 635, 636, 647, 650, 654, 661, 665, 677, 678, 689, 699, 701, 702, 705, 707, 708, 712, 716, 718, 719, 721, 727, 731, 732, 742, 744, 745, 752, 755, 766, 772, 773, 775, 784, 789, 790, 796, 797, 802, 804, 807, 808, 810, 811, 813, 814, 815, 818, 820, 821, 822, 823, 825, 826, 829, 833, 840, 845, 846, 847, 848, 850, 851, 852, 853, 854, 858, 866, 871, 872, 874, 905, 909, 910, 911, 926, 929, 931
- map 25, 130, 150, 201, 459, 460, 539, 677, 895
- model 38, 141, 142, 147, 161, 311, 367, 428, 513, 693, 762
- relict vegetation 250, 483, 519, 521, 534, 536, 619, 804, 843
- shrubland 6, 23, 24, 45, 52, 61, 70, 77, 80, 90, 91, 94, 100, 101, 103, 109, 111, 116, 123, 124, 126, 132, 133, 135, 141, 155, 156, 166, 169, 170, 171, 172, 173, 174, 175, 182, 225, 243, 258, 264, 279, 294, 298, 302, 303, 305, 312, 333, 340, 353, 358, 360, 379,

- 385, 386, 389, 415, 416, 429, 430, 431, 443, 444,
449, 472, 477, 486, 530, 540, 555, 556, 557, 565,
579, 582, 583, 588, 591, 592, 594, 597, 598, 599,
619, 637, 657, 660, 669, 673, 674, 679, 680, 682,
723, 736, 737, 738, 743, 757, 770, 771, 791, 793,
794, 795, 799, 801, 816, 817, 838, 844, 855, 856,
858, 860, 862, 864, 865, 866, 867, 868, 871, 873,
874, 876, 878, 879, 882, 883, 889, 916, 918, 922,
923, 925, 930, 931
- soil-vegetation relationship 14, 26, 42, 43, 44, 70, 71, 77,
79, 81, 82, 83, 84, 85, 86, 87, 88, 94, 120, 129, 132,
140, 143, 157, 158, 162, 204, 229, 230, 234, 237,
249, 254, 255, 257, 260, 263, 278, 286, 295, 297,
313, 317, 322, 336, 339, 345, 346, 350, 370, 376,
382, 392, 429, 442, 443, 445, 470, 471, 472, 479,
491, 508, 529, 534, 535, 546, 552, 554, 555, 556,
557, 563, 564, 576, 588, 621, 626, 630, 642, 643,
679, 686, 687, 691, 709, 710, 722, 746, 749, 771,
827, 853, 877, 879, 886, 893, 894, 898, 917
- succession 23, 35, 37, 38, 47, 51, 65, 78, 80, 94, 110, 128,
151, 161, 172, 173, 178, 179, 181, 182, 188, 191,
209, 214, 224, 233, 248, 255, 258, 261, 262, 269,
270, 272, 273, 275, 282, 287, 288, 296, 300, 301,
358, 359, 360, 366, 367, 368, 385, 401, 434, 439,
440, 441, 447, 457, 467, 472, 473, 474, 476, 480,
484, 489, 490, 492, 515, 517, 520, 531, 532, 540,
550, 566, 569, 571, 573, 591, 594, 597, 633, 637,
638, 639, 640, 668, 669, 676, 680, 682, 683, 690,
693, 714, 715, 720, 723, 724, 725, 726, 739, 750,
753, 770, 774, 776, 778, 781, 783, 794, 795, 799,
803, 809, 817, 824, 831, 832, 834, 842, 843, 861,
869, 880, 881, 883, 885, 889, 890, 906, 915, 916,
919, 921, 922, 923, 924, 925, 927
- wetland 95, 96, 115, 119, 120, 130, 301, 311, 340, 351,
399, 440, 442, 528, 585, 586, 629, 641, 659, 729,
769, 901
- woodland 2, 7, 8, 14, 15, 23, 35, 39, 52, 60, 68, 73, 137,
142, 146, 147, 175, 212, 228, 235, 288, 289, 290,
291, 292, 293, 294, 295, 296, 318, 344, 400, 401,
435, 464, 473, 474, 482, 483, 544, 545, 546, 566,
573, 578, 583, 592, 593, 599, 617, 632, 638, 648,
665, 739, 750, 776, 777, 778, 779, 780, 781, 782,
783, 787, 798, 800, 822, 824, 834, 857, 858, 861,
869, 871, 874, 875, 884, 885, 886, 887, 888, 890,
898, 908, 916, 919, 920, 933
- zonation 67, 72, 120, 435, 551, 581, 625, 653, 671, 704,
768, 788, 837, 841, 888

Received 1 July 1990

Accepted 15 September 1990